

KV-E2511D

RM-689

SERVICE MANUAL

AEP Model

Chassis No. SCC-C98B-A



AE-1A CHASSIS

Note: The service manual for RM-689 has been issued separately.

MODELS OF THE SAME SERIES

KV-E2511D	
KV-E2911D	

SPECIFICATIONS

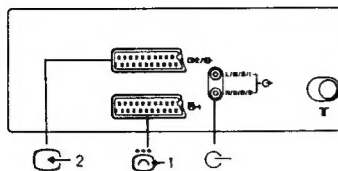
Television system	B/G/H
Color system	PAL, SECAM, NTSC 3.58, NTSC 4.43 (selected automatically)
Channel coverage	See »RECEIVABLE CHANNELS AND CHANNEL DISPLAYS«
Picture tube	Trinitron tube Approx. 63.5 cm (25 inches) (Approx. 59 cm picture measured diagonally) 110-degree deflection
Inputs	<ul style="list-style-type: none"> 1 21-pin connector: CENELEC standard including RGB input. 2 21-pin connector: including S video input 3 4-pin DIN S video input connector Y: 1 Vp - p \pm 3 dB 75 ohm C: 0,3 Vp - p \pm 3dB 75 ohms Audio input jacks: phono jack
Outputs	21-pin connector: CENELEC standard Headphones jack: stereo minijack External speaker terminals: 2-pin DIN Audio output jacks: phono jack (output dependent upon TV settings)
Sound output	30 W + 30 W (music power)
Power consumption	101 Wh
Dimensions not incl. speakers	Approx. 575 x 493 x 468.3 mm (w/h/d)
Dimensions incl. speakers	Approx. 756.6 x 493 x 468.3 mm
Weight not incl. speakers	Approx. 35.8 kg
Weight incl. speakers	Approx. 40.9 kg
Supplied accessories	RM-689 Remote Commander (1) IEC designation R 6 batteries (2)
	Detachable speakers (1 pair) Woofer (1)

Design and specifications are subject to change without notice.



TRINITRON® COLOR TV
SONY®

21 pin connector (1, 2)



Pin No	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance: Less than 1kohm*
2	○	○	Audio input B (right)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
3	○	○	Audio output A (left)	Standard level: 0.5Vrms Output impedance: Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
7	○	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5–12 V): Part mode Low state (0–2 V): TV mode Input impedance: More than 10kohms Input capacitance: Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal: 0.7V±3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	–	Red input	0.7V±3dB, 75ohms, positive
	–	○	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1–3 V) Low state (0–0.4 V) Input impedance: 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V±3dB, 75ohms, positive Sync: 0.3V (–3, +10dB)
20	○	–	Video input	1 V±3dB, 75ohms, positive Sync: 0.3V (–3, +10dB)
	–	○	Video Input/Y (S signal)	1 V±3dB, 75ohms, positive Sync: 0.3V (–3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open)

* at 20 Hz–20 kHz

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!


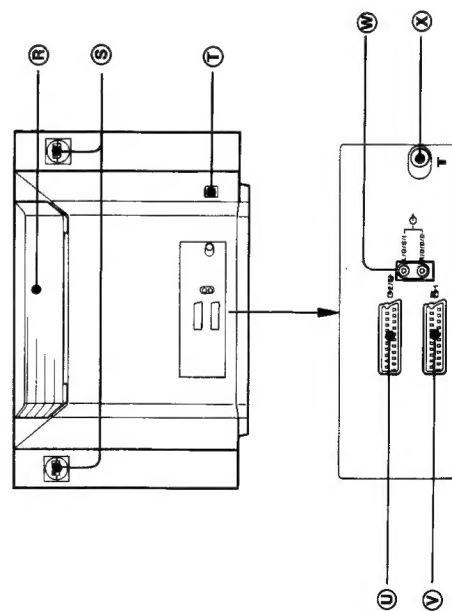
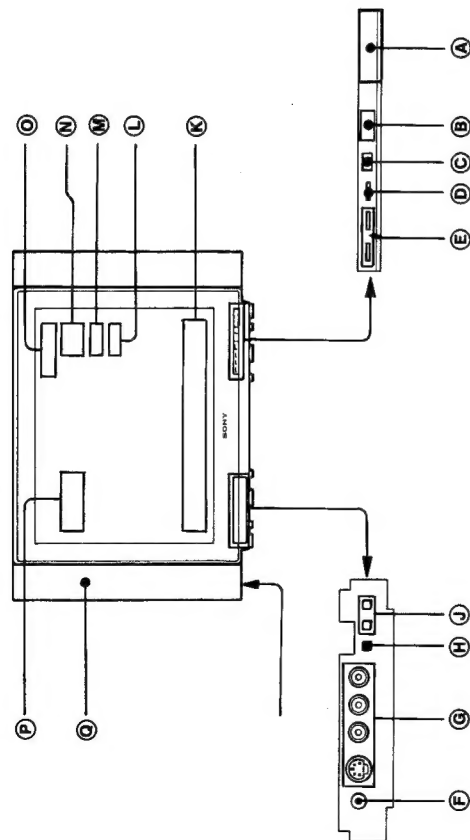
COMPONENTS IDENTIFIED BY SHADING AND  MARK ON THE SCHEMATIC DIAGRAMS ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THE SERVICE MANUAL. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THE SERVICE MANUAL PUBLISHED BY SONY.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1. GENERAL			4. CIRCUIT ADJUSTMENTS		
1-1.	Function of Controls.....	4	4-1.	A Board Adjustments	17
1-2.	To Preset Channels.....	6	4-2.	B Board Adjustments.....	17
1-3.	Viewing Teletext.....	7	4-3.	V Board Adjustments.....	17
1-4.	Connecting Other Equipment.....	8	4-4.	D Board Adjustments.....	18
1-5.	How to Attach the Speakers	8	4-5.	J1 Board Adjustments.....	18
2. DISASSEMBLY			4-6.	Secondary Adjustments	19
2-1.	Rear Cover Removal.....	9	5. DIAGRAMS		
2-2.	Chassis Assy Removal.....	9	5-1.	Block Diagram	19
2-3.	A, J1 Boards Opening and F1 Board Removal.....	9	5-2.	Circuit Boards Location	24
2-4.	V, B and Y Boards Removal.....	10	5-3.	Schematic Diagrams and Printed Wiring Boards	25
2-5.	Picture Tube Removal.....	10	5-4.	Semiconductors.....	47
2-6.	Service Position	11	6. EXPLODED VIEWS		
3. SET-UP ADJUSTMENTS			6-1.	Chassis	48
3-1.	Beam Landing.....	12	6-2.	Picture Tube.....	49
3-2.	Convergence.....	13	6-3.	Speaker (L, R Woofer).....	50
3-3.	Focus	15	7. ELECTRICAL PARTS LIST		51
3-4.	White Balance.....	16			

SECTION 1 GENERAL



ON THE SET

- A Power Switch**

Use it to switch the set on and off. When you switch the set on, the programme number of the station tuned in will be indicated in the on-screen display for some seconds. In case of short breaks of operation, you can switch the set on and off using the Remote Commander (See «CONTROLS ON THE REMOTE COMMANDER»).
- B Remote control detector**

(See «CONTROLS ON THE REMOTE COMMANDER»).
- C Standby/Response indicator**

This indicator lights up when the TV set is in standby mode and it flashes each time the set receives signals from the Remote Commander.
- D Noise reduction indicator**

This indicator lights up when noise reduction has been activated by pressing button on the Remote Commander.
- E Stereo A/B indicators**

During bilingual programmes one of the two indicators lights up, depending upon the selected channel **A** or **B**. When stereo programmes are broadcast both indicators light up. (See «CONTROLS ON THE REMOTE COMMANDER»).

Jacks and control panel

- The jacks and the control panel are situated behind a cover. Please press the arrow marking on the cover to open it.
- F Headphones jack (stereo minijack)**

Connect only stereo headphones.
 - G Input jacks**

V/C input connector (4-pin) 3
Video input jack (phono jack) 3 (yellow)
Audio input jacks (phono jacks) L/G/S/I and R/D/D/D/D (red and white).
 - H Mode select button**

Use this button to select either the programme tuning mode, volume adjustment or the input mode.
 - I Adjustment buttons +/-**

Select at first the item to be adjusted using the Mode select button P (programme tuning mode), (volume) or (input mode), then adjust the item by pressing the + or - button.

You can also use these buttons to reset the picture and sound adjustments to the factory-set levels. For this purpose press both buttons simultaneously.

On-screen display
When you press button on the Remote Commander, the following information will be indicated on the screen:

K Picture and sound adjustment items:
 contrast, colour, brightness, hue (only for NTSC), sharpness, bass, treble or balance and the respective levels, as well as mute, reset, space sound and loudness indications, when the respective buttons are pressed.

When you press button on the Remote Commander, the following information will be indicated on the screen:

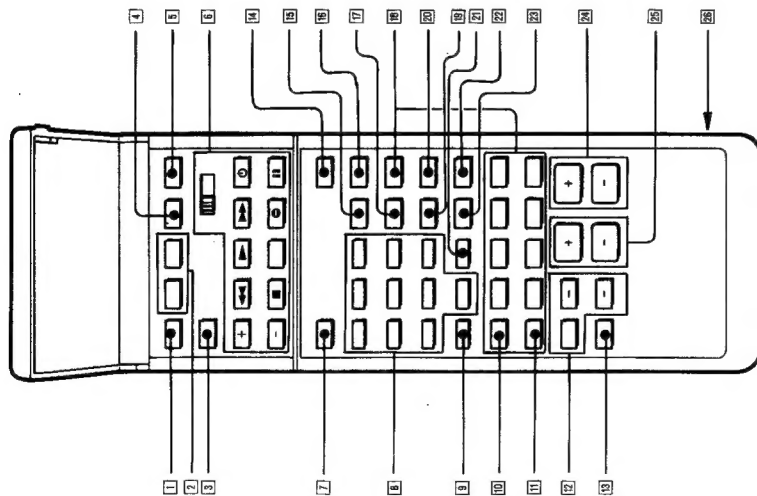
- L TV-System: B/G**
- M Channel number**
- N Programme number or input mode:**
 1, 2, 3 or 3;
- O Indication of the station name**
- P AV output indication; 1 2 3 or TV (see «CONTROLS ON THE REMOTE COMMANDER»).**

Speakers

See «HOW TO ATTACH THE SPEAKERS».

Connectors on the rear

- R Woofer**
- S Terminals for connecting the woofer**
- T Terminals for the right and left speakers**
- U Euro-AV-connector 21-pin**
For connecting a VTR, 8 mm video camera recorder, a video disc player or in general devices with an S-Video-output.
- V Euro-AV-connector 21-pin**
For connecting a VTR, a video disc player, a computer etc.,
- W Audio-output-jacks (phono jacks)**
For connecting audio equipment, e.g. an amplifier, so that the sound will be output at the audio equipment. In this case the volume is adjustable on the TV set.
- X Aerial terminal**



ON THE REMOTE COMMANDER

On the set there is a Remote Control detector (8), which receives the signals of the Remote Commander.

- 1 **Preset-button** Used for selecting the Preset mode. See »TO PRESET CHANNELS«;

- 2 **Tuning +/- buttons**
a) Preset mode: Used for tuning in stations in the Automatic Station Search; See »TO PRESET CHANNELS«;
b) TV-mode: Used for fine-tuning a station. See »ADDITIONAL FUNCTIONS«;

- 3 **C.. button (Clear)**
Used for clearing programme positions, so that the position will be skipped when the PROG +/- buttons (24) are pressed. See »TO PRESET CHANNELS«.

- 4 **Store button:** Used for storing channels. See »TO PRESET CHANNELS«;

- 5 **TV-system-select-button**
This button has no function;

- 6 **Video selector and video operation buttons**
Used for operating Sony video equipment. For details see »CONNECTING OTHER EQUIPMENT«;

- 7 **Mute button**
By pressing this button the sound of the set will be switched off and by pressing it once more the sound will be restored.

- 8 **Number buttons**
a) Used to select programme positions or to input channel numbers (in the preset mode).
b) If the set is in the standby mode, press one of the number buttons to switch it on.
c) After pressing the Output select button (17) the buttons 1-3 can be used to select the different Output connectors.

- 9 **+/- Button**
In case of two digit numbers, press first this button and then the two respective number buttons (8).

- 10 **Button for On-screen display**
By pressing this button information about the station tuned-in will be indicated on the screen. The indications will disappear after some seconds with the exception of the programme number, which will stay on the screen until the button is pressed once again.

- 11 **Time button** (1)
In TV-mode: If teletext service is broadcast on the selected channel, press this button to display the current time on the screen and once again to make it disappear.

- 12 **+/- Buttons for picture and sound adjustments**

a) **TV-mode:**
The picture and sound adjustments are stored as standard values. You have, however, the possibility to change them to your individual liking. Press the button repeatedly until the required item is indicated in the on-screen display: (1) contrast, (2) colour, (3) brightness, (4) hue (only for NTSC colour system), (5) sharpness, (6) bass, (7) treble or (8) balance. You can adjust the settings by pressing the + or - button.
b) **Preset-mode:** Use these buttons to name a station. See »TO PRESET CHANNELS«;

- 13 **Reset-button**
By pressing this button the picture and sound adjustments are reset to the factory-set levels.

- 14 **Standby-button**
Press this button to switch the set into standby-mode. You can switch it on again by pressing the TV-button (16) or one of the number buttons (8). To return to the teletext mode, press the (10)/(11) button. There will be a slight delay before the picture is restored.

Note

Use the Standby-button (14) only when switching the set off for a short period of time. If the set will not be used for a longer span of time, switch it off by using the Power switch (A).

- 15 **Input-Select-Button**
Press this button to select the audio- or video-signals input at the various input connectors. With each pressing of the button a different connector is selected. The following indications will appear sequentially:
C- 1 -> (1) (RGB) -> C- 2 -> (2) -> C- 3 -> (3) -> TV-mode

- 16 **TV-Button**
When pressing this button the set returns from standby, video input- or teletext mode to the TV-mode.

- 17 **Output-Select-Button**
Press this button to select the audio- or video signals to be output at the (1)/(2) connector. First press this button, then select the desired signal source using the number buttons (8) (either 1, 2 or 3) or the TV-button (16) (if the signals which are on the screen are to be output).

- 18 **Teletext operation buttons**
These buttons are used for teletext operation. See »VIEWING TELETEXT«.

- 19 **Loudness button**
By pressing this button the high and low tones will be emphasized. Press the button again to restore the normal sound. The indications on the screen will be (1) or (2).

- 20 **A/B button**
To select the channel of bilingual programmes. Usually the synchronized version is broadcast on channel A and the original sound is broadcast on channel B. In the video input mode (Euro-AV-connectors) this possibility of selecting channels also exists.

- 21 **C (Channel select) button**
Use this button for direct channel tuning in the TV-mode. See »ADDITIONAL FUNCTIONS«.

- 22 **Noise reduction button**
Press to reduce the noise on the picture. The Noise reduction indicator (10) lights up. Press the button again to restore the normal picture.

- 23 **Space sound button**
Press this button to obtain special acoustic effects. Press it again to restore the normal sound. The indications on the screen will be (3) or (4).

- 24 **PROG +/- buttons**
TV-mode: Use these buttons to scan the available programmes up- or downwards.
Preset mode: Use these buttons to scan the available channels up or downwards.

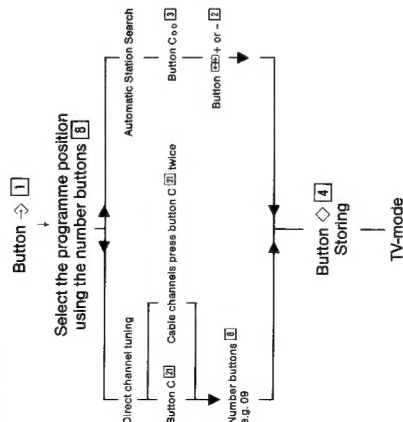
- 25 **+/- buttons for adjusting the volume**

- 26 **Battery compartment (on the rear)**

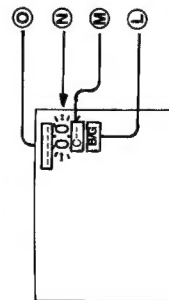
1-2. TO PRESET CHANNELS

Use the buttons on the Remote Commander for presetting. In total there are 60 programme positions at your disposal for storing channels. There are two different ways of tuning in channels:

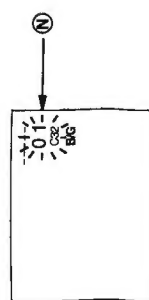
- 1. Direct Channel Tuning**
You know the channel number of a station and can input it directly.
- 2. Automatic Station Search**
The set searches automatically for stations (including cable channels).



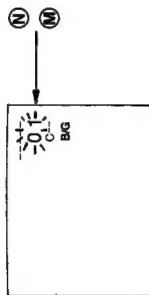
- 1. Direct Channel Tuning**
1. Press the Preset button \diamond 1. You are now in the preset mode of the set. The programme number in the on-screen display \odot starts blinking.



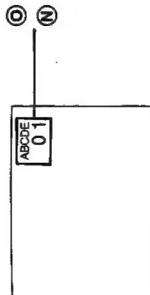
2. With the buttons PROG \pm 24 or the number buttons 8 you can select the programme position. In case of two-digit numbers, press first the button \pm 24 and then the two number buttons.



3. Press button C 21. The indication C_{xx} and the channel number start blinking in the display \odot . Select the channel number with two digits (e.g. 04) using the number buttons 8.



- If you want to select a cable channel press button C 21 twice. In this case the indication S_{xx} will appear in the display \odot . Select the channel number as described above.
4. Press the button \diamond 4 in order to store the channel and to return to the TV-mode.



If you want to store further channels, repeat the steps 1 to 4.

2. Automatic Station Search

1. Press button \diamond 1. You are now in the preset mode of the set. The programme number in the on-screen display \odot starts blinking.
2. With the PROG buttons \pm 24 or the number buttons 8 you can select the programme position. In case of two-digit numbers, press first button \pm 24 and then the two number buttons.
3. If there is already a stored station on the selected programme position, press button C_{xx} 3.
4. Press one of the tuning buttons \pm 24 to start the station search. The search will be interrupted as soon as a station is tuned in. Press the tuning buttons repeatedly until you find the desired station.
5. If you have found the desired station, press button \diamond 4. Now the selected station is stored and you are back in the TV-mode.
6. If you want to store further stations, repeat the steps 1-5.

Skipping of unused programme positions

Using button C_{xx} 3 you have the possibility to have unused programme positions (e.g. without a stored station) skipped, when pressing the buttons PROG \pm 24 on the Remote Commander.

1. Press button \diamond 1. You are now in the preset mode of the set.
2. Use the buttons PROG \pm 24 to select the programme position, which you want to have skipped.
3. Press button C_{xx} 3.
4. Press button \diamond 4 to store the cleared programme position and to return to the TV-mode.

The skipped programme positions still appear when you press the number buttons 8 on the Remote commander.

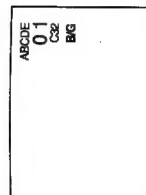
If you want to name a station

After presetting the stations you have the possibility to name them. The selected name will appear in the on-screen display \odot .

1. Press the preset button \diamond 1.
2. Press the button \pm 24. The first column of the station name starts blinking. Press either button \pm or \pm 24 and select the desired character (number or letter, 0-9, A-Z, - for a blank column).
3. Press button \pm 24 again. Now the second column starts blinking and you can select the second character. In this way five characters can be selected.
4. Press button \diamond 4 to store the station name.

Notes

- If you press the preset button \diamond 1 instead of button \diamond 4 the set will return to the TV-mode without storing the channels.
- If you press a wrong programme or a channel number, an S_{xx} will be displayed on the screen.
- When pressing two number buttons, the second number button should be pressed within 5 seconds after the first one, otherwise the operation will be cancelled.

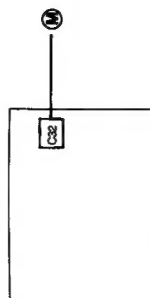


ADDITIONAL FUNCTIONS

Direct Channel Tuning in the TV-mode

You have the possibility to tune in channels directly when the set is in the TV-mode without storing these channels. Example: You tune in channel number 32. If you switch the set off or change the programme position, this channel will be cancelled.

1. Press the button C 21. In the display \odot the indication C_{xx} will appear. For cable channels press the button C 21 twice. On the screen S_{xx} will be displayed.
2. Select the channel number with two digits using the number buttons 8 (e.g. for channel 4 press first 0, then 4). The indication on the screen will disappear within some seconds.



Manual Fine Tuning

If the reception of a channel is not satisfactory, you have the possibility to deactivate the Automatic Fine Tuning, which is usually in operation during presetting in order to tune in the best possible picture. Press one of the tuning buttons \pm 24 to fine-tune a channel. The Automatic Fine Tuning will be restored when the respective programme position is pressed once again.

Auto shut off-Function

The TV set automatically goes into standby-mode some time after the transmission on a channel is finished.

1-3. VIEWING TELETEXT

To view the teletext service, use the Remote Commander. The buttons for teletext operation are indicated in green.

Operation

- 1 Select the TV channel for the desired teletext service. When the signal is weak, teletext errors often occur.
- 2 Press **[TEXT/MIX]** to display the teletext service.
- 3 Key in the three digits of the desired page using the number buttons. If an error is made, complete the three-digit sequence by keying in any digit. Then, re-enter the correct page number.

The requested teletext page is displayed.

To return to the TV mode, press TV on the Remote Commander.

To request the index page

Press **[INDEX]**.
If the necessary signal is not being broadcast, page 100 is displayed.

To access the next or preceding page

Press **[PAGE +]** or **[PAGE -]**.

To superimpose the teletext display on the picture

Press **[TEXT]** twice from the TV mode.
Press **[TEXT]** again to return to the TEXT display.

To suppress the teletext display so that the TV picture is displayed

Press **[TEXT CL]**.
This button can be operated from both the TEXT and MIX displays.

To prevent a teletext page from being updated/changed

Press **[HOLD]**. The HOLD symbol appears on the screen. To resume normal teletext reception, press **[TEXT/MIX]**.



To resume normal teletext reception, press **[TEXT/MIX]**.

To enlarge the teletext display

Press **[TEXT]** once to enlarge the upper half of the display; press again to enlarge the lower half of the display. And press again to return to the normal display.

To reveal concealed information such as answers to a quiz

Press **[REVEAL]**.
Press again to conceal the answers.

The teletext service can be displayed directly from the standby mode by pressing **[TEXT/MIX]**.

To receive the teletext service of a different TV channel

- 1 Press TV to return to the TV mode.
- 2 Select the desired TV channel.
- 3 Press **[TEXT/MIX]**.

Note

Buttons not referred to in the text do not operate.

To watch the TV programme while waiting for a requested page to be displayed

- 1 Request the new page.
 - 2 Press **[TEXT]** to watch the TV programme.
- The requested page number and other data appear at the top of the screen. When the requested page has been captured, the page number is displayed in the top left hand corner of the screen.



To view this page, press **[TEXT]**.

To have a requested page displayed at a pre-determined time

- 1 Request a time coded page (e.g. alarm page).
 - 2 Press **[TP ON]**.
- "T***" will appear at the bottom of the screen.



- 3 Enter your request time with the number buttons, using four digits. For example, 07 30.



To watch the TV programme until the requested time, press **[TEXT CL]**. At the requested time, the page number will be displayed at the bottom of the screen.

To view this page, press **[TEXT]**.

To cancel the request, first ensure that the teletext page is displayed, then press **[TP OFF]**.

To view the input picture

Press the **[AV]** button repeatedly until the desired input signal indication appears on the screen.

[AV-1]: to view the audio and video signal input through the **[AV-1]** connector on the rear.

[AV-1]: to view the RGB signal (i.e. from a computer, etc.) input through the **[AV-1]** connector.

[AV-2]: to view the audio and video signal input through the **[AV-2]** connector on the rear.

[AV-2]: to view the S video signal (from a VTR equipped with an S video output) input through the **[AV-2]** connector.

[AV-3]: to view the audio and video signal input through the **[AV-3]** connectors and the audio input jacks (yellow, white and red) on the front.

[AV-3]: to view the S video signal input through the **[AV-3]** connectors on the front (4-pin connector and white and red phone jacks).

You can also select the desired input mode using the buttons on the front of the set. Select the **[AV]** mode with the mode select (**[P-]** → **[P+]** → **[AV]**) button then press **[AV]** button.

To return to the TV mode, press the TV-button.

To select the signal to be output from the [AV-2/AV-3] connector

Press the **[AV]** button **[AV]**, then 1, 2, 3 or the TV-button **[TV]** while **[AV]** is displayed, so that one of the following indications is displayed:

1 **[AV-1]**: The audio and video signal input through the **[AV-1]** connector is output from the **[AV-2/AV-3]** connector.

2 **[AV-2]**: The audio and video signal input through the **[AV-2/AV-3]** connector is output from the **[AV-2/AV-3]** connector.

3 **[AV-3]**: The audio and video signal input through the **[AV-3]** connectors is output from the **[AV-2/AV-3]** connector.

TV **[TV]**: The audio and video signal input through the TV aerial terminal (i.e. usually the TV signal) is output from the **[AV-2/AV-3]** connector.

The indication will disappear after a few seconds.

Note

The TV-signal is always output at the EURO-AV connector **[AV-1]**.

To operate a Sony video equipment
The video operation buttons **[V]** on the Remote Commander can operate the VTRs and video disc players manufactured by Sony.

1. Switch the video selector to the desired position.

VIDEO 1: to operate Sony Betamax VTR and SLV 202 VHS.

VIDEO 2: to operate Sony 8mm VTR.

VIDEO 3: to operate Sony VHS VTR.

MDP: to operate Sony video disc player including a multi disc player.

2. Press the operation button(s) to start operation.

PROGR +/-: to select the desired programme on the VTR.

[F]: to rewind the tape or to rapidly go back to the desired position on the disc

[P]: to start playback

[F]: to advance the tape or the disc rapidly to the desired position

[P]: to stop the tape or the disc, or to release the pause mode

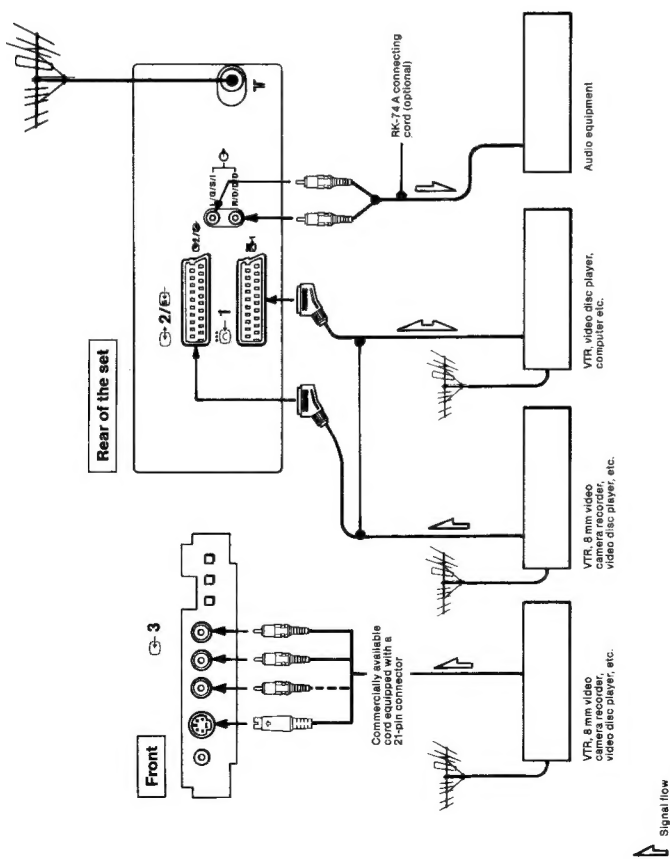
[P]: to start recording on the VTR

Be sure to press this button and the one on the left simultaneously

[P]: to switch the video equipment on and off

[P]: to stop the tape or the disc temporarily (pause)

1-4. CONNECTING OTHER EQUIPMENT



S video input (Y/C input)
Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Usually these two signals are combined in a VTR and output as one signal, and supplied to a TV. Separation of the Y and C signals prevent them from interfering with one another, thereby improving picture quality (especially in luminance). This set is equipped with two S video input jacks through which these separated signals can be input directly. Connect one of the two S video output jacks on the VTR to the S video input on this set.

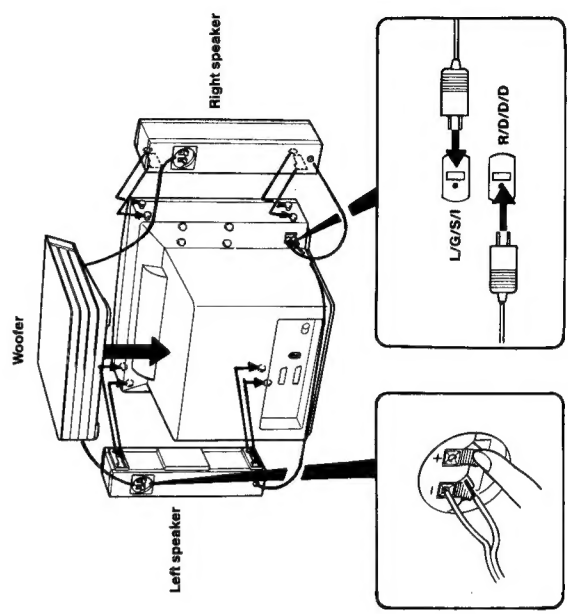
- Connect the S video output of the VTR, etc. here.
 - To connect S video connectors (4-pin DIN), use an optional YC-15/YC-15 EV connecting cable.
- Notes**
- It is also possible to connect a VTR using the 1r terminal. In this case, connect the aerial to the aerial terminal of the VTR.
 - Move the VTR away from the TV if the picture or the sound is distorted.
 - Computers which have RGB output only can be connected to the 1r-1 input connector.

1-5. HOW TO ATTACH THE SPEAKERS

	KV-E2511 D
1	Place the woofer on the rear cover of the set.
2	Attach the right and left speakers on the sides of the set.
3	Connect the speaker cords of the woofer to the speaker terminals on the right and left speakers: connect the black cord to the - (black) terminal and the white cord to the + (red) terminal.
4	Connect the left speaker cord to the L/G/S/I terminal and the right speaker cord to the R/D/D/D terminal on the rear of the TV set.

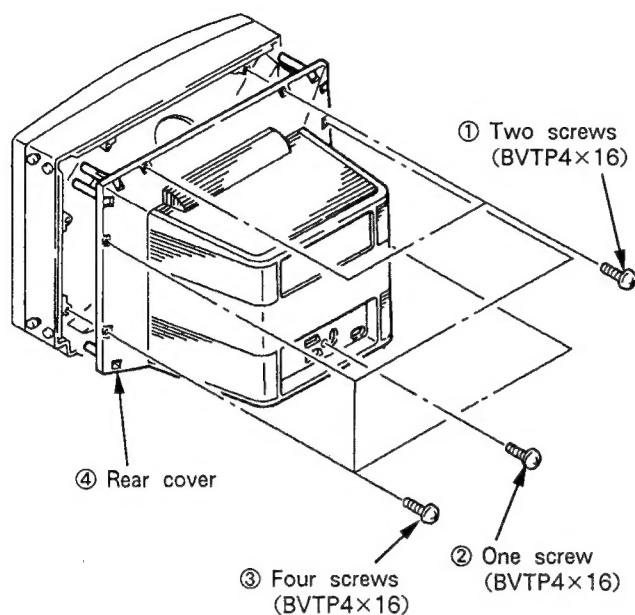
Note

Make sure that the set is turned off when you install the speakers.

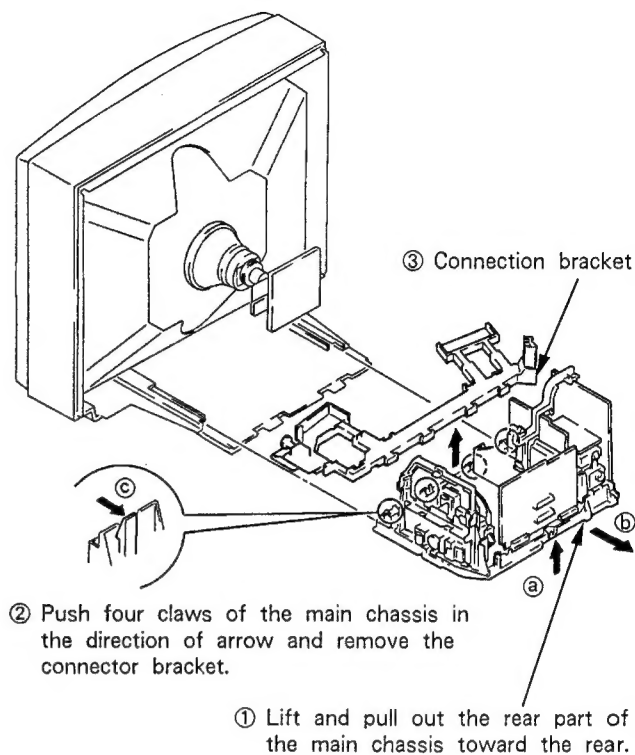


SECTION 2 DISASSEMBLY

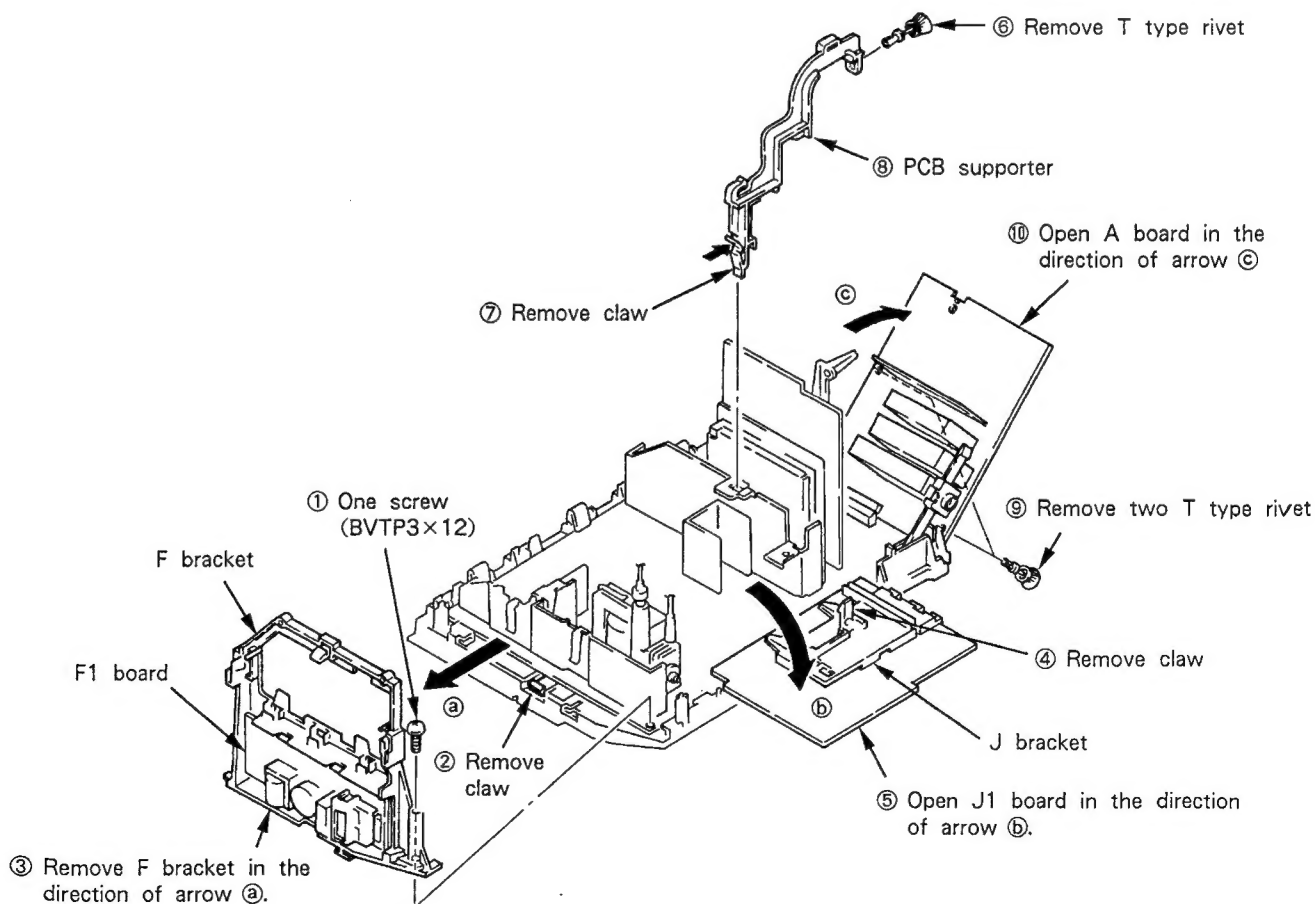
2-1. REAR COVER REMOVAL



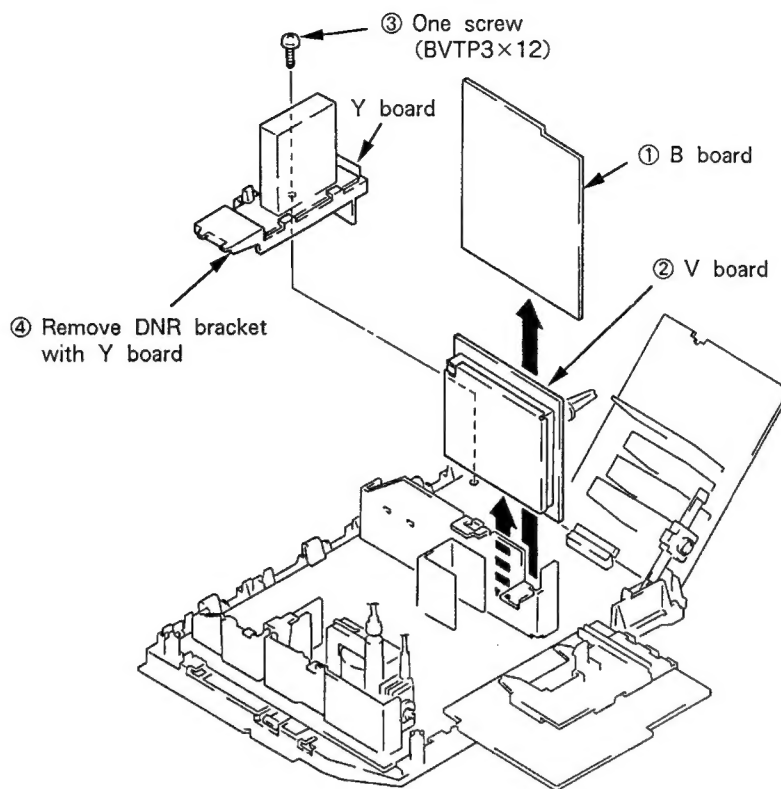
2-2. CHASSIS ASSY REMOVAL



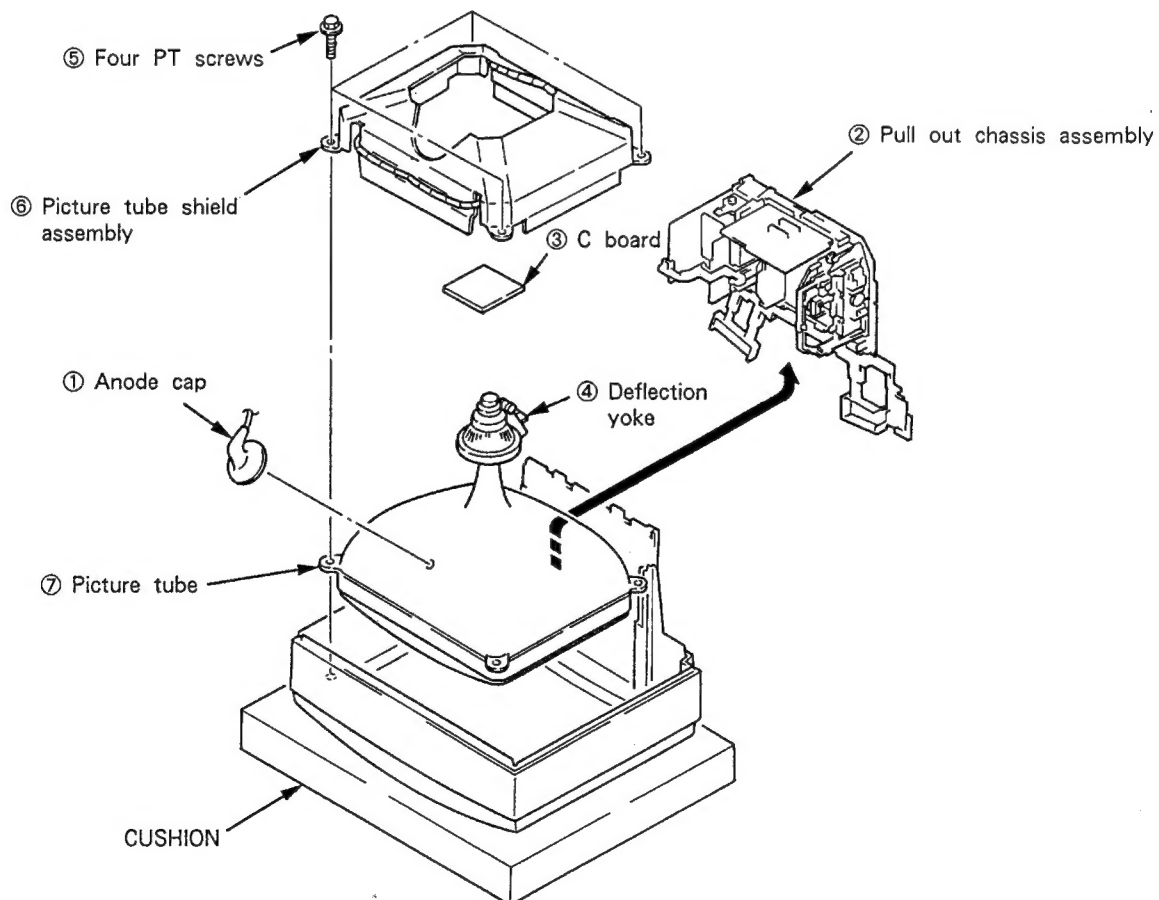
2-3. A, J1 BOARDS OPENING AND F1 BOARD REMOVAL



2-4. V, B AND Y BOARDS REMOVAL

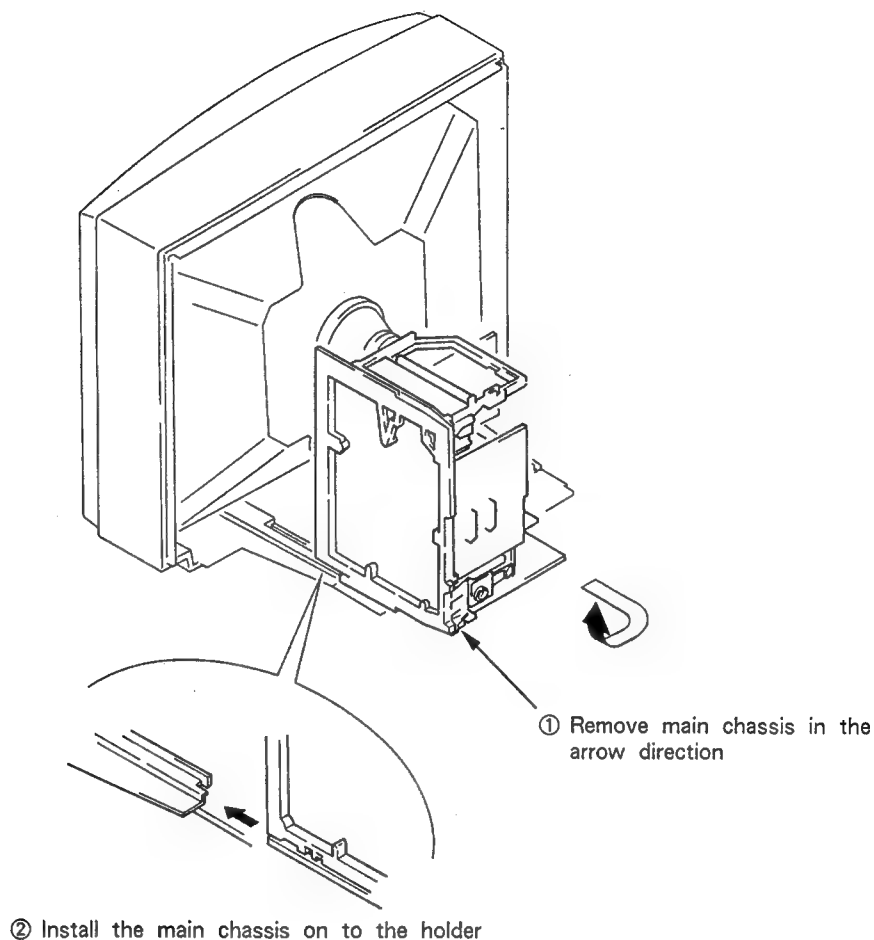


2-5. PICTURE TUBE REMOVAL



2-6. SERVICE POSITION

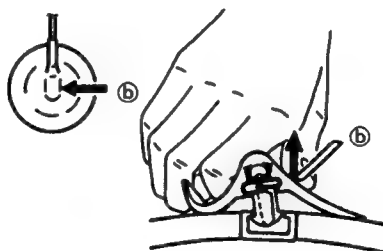
*Remove the connector bracket and then perform the following servicing (refer to 2-2, CHASSIS ASSEMBLY REMOVAL).



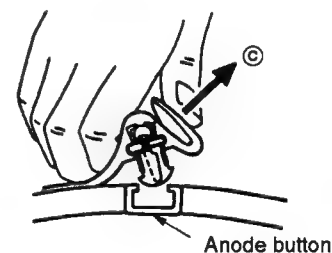
• REMOVAL OF ANODE-CAP • REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow (a).



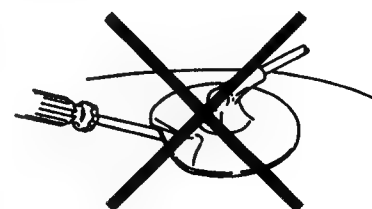
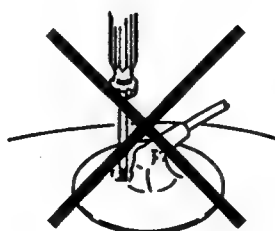
② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).



③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow (c).

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or hurt the rubber.

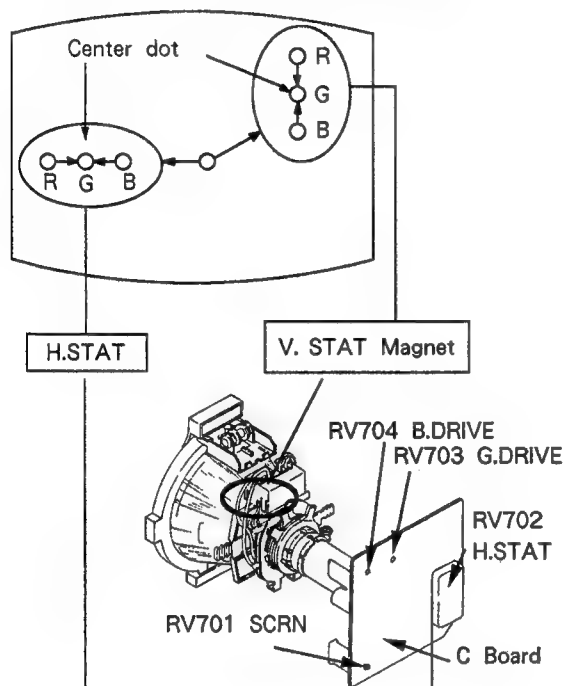


3-2. CONVERGENCE

Preparations :

- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

(1) Horizontal and vertical static convergence

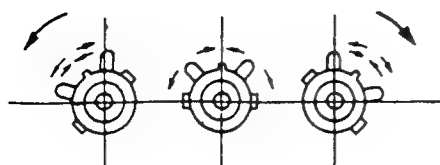
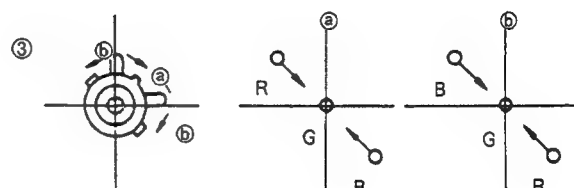
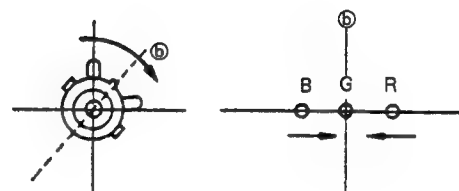
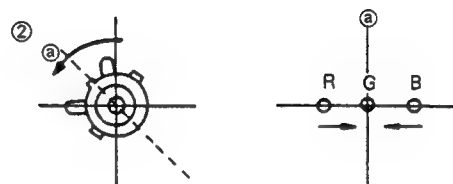
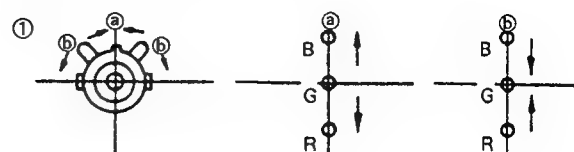


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor can not bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.

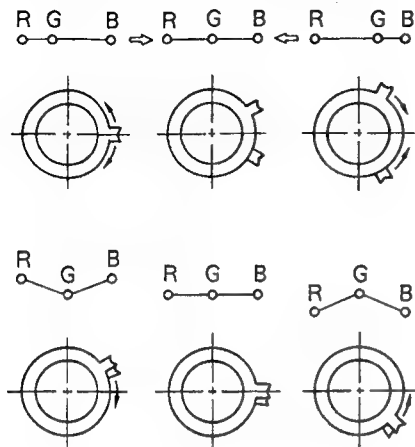
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other's settings.)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

4. If the V.STAT magnet is moved in the direction of the ① and ② arrows, the red, green, and blue points move as shown below.

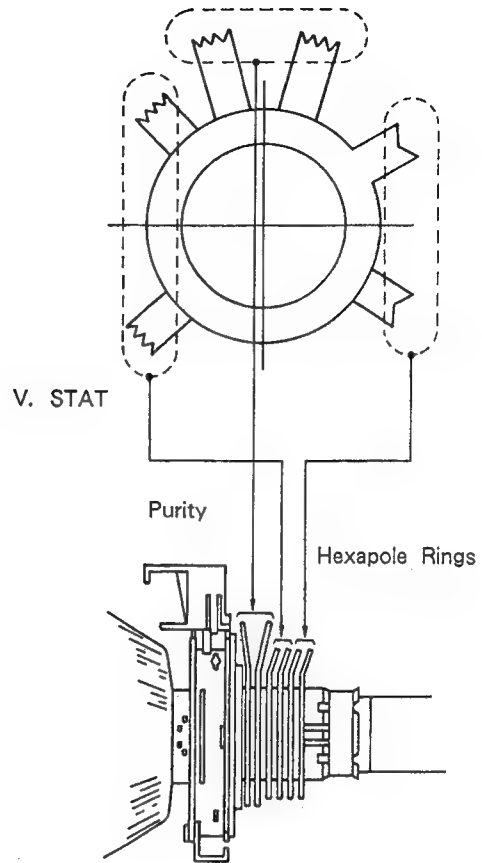


● Operation of Hexapole Ringed Magnet



The respective dot operations resulting from the operation of each magnet are not completely independent, so be sure to perform adjustment while tracking.

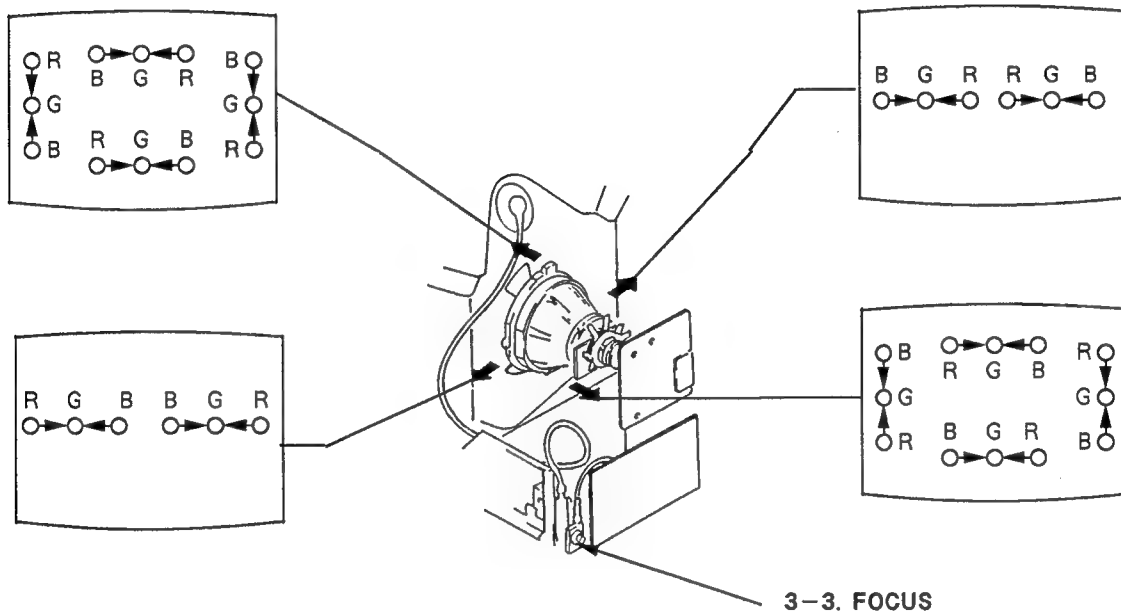
Use the H, STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).



(2) Dynamic convergence adjustment

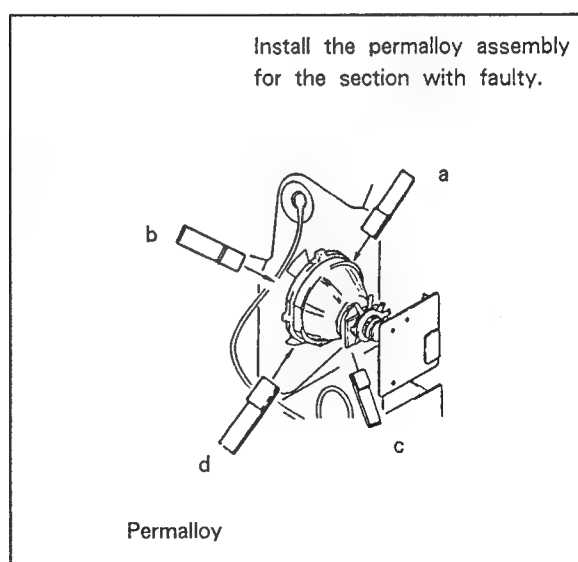
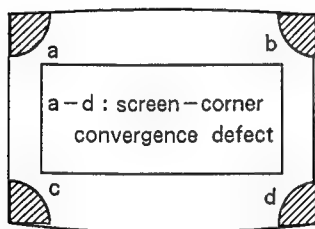
Preparations

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.
- 1. Slightly loosen the deflection yoke screws.
- 2. Remove the deflection yoke spacer.
- 3. Move the deflection yoke as shown in the figure below and optimize the convergence.
- 4. Tighten the deflection yoke screws.
- 5. Install the deflection yoke spacer.



Adjust the focus to optimize the screen.

(3) Screen corner convergence



3-4. WHITE BALANCE

[Screen G2 setting]

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 170 VDC to the R, G, and B cathodes with an external power supply.
4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

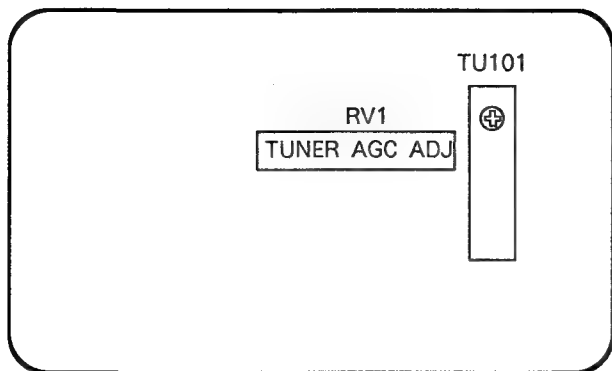
[White balance adjustment]

1. Input an all-white signal from the pattern generator.
2. Set the picture brightness and color controls to their normal levels.
3. Use RV704 (B Drive) and RV703 (G Drive) to adjust the white balance.

In the adjustments below, have the picture color and brightness settings at their normal levels unless there is a specific instruction to the contrary.

SECTION 4 CIRCUIT ADJUSTMENTS

4-1 A BOARD ADJUSTMENTS

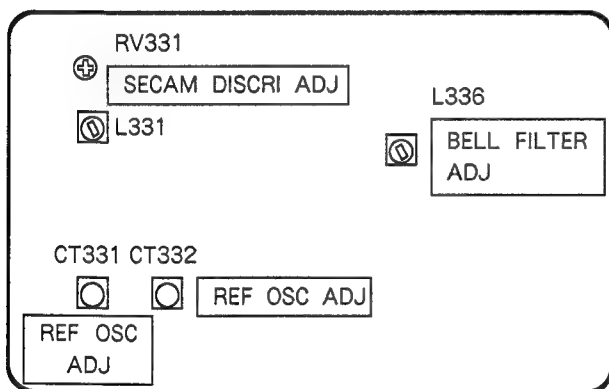


(COMPONENT SIDE)

TUNER AGC ADJUSTMENT (VIF101 RV1)

1. Align with an appropriate signal between stations.
2. Adjust RV1 so that snow noise and cross modulation just disappear from the picture.

4-2. B BOARD ADJUSTMENTS



(COMPONENT SIDE)

REFERENCE OSCILLATOR ADJUSTMENT (CT332 8.8 MHz)

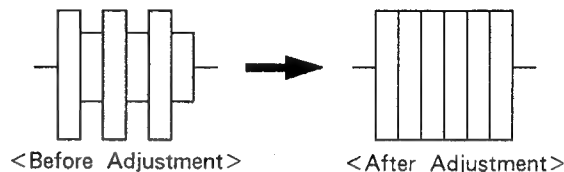
1. Input a PAL color bar signal.
2. Ground Pin ⑩ of IC331.
3. Adjust CT332 to obtain synchronization.

REFERENCE OSCILLATOR ADJUSTMENT (CT331 7.16 MHz)

1. Input an NTSC color bar signal.
2. Ground Pin ⑩ of IC331.
3. Adjust CT331 to obtain synchronization.
4. Remove the jumper grounding Pin ⑩ of IC331.

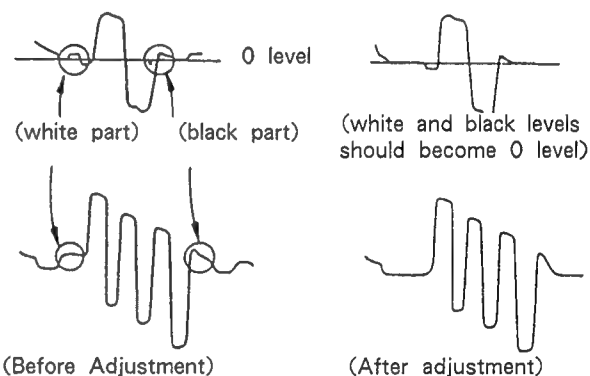
BELL FILTER ADJUSTMENT (L336)

1. Input a SECAM color bar signal.
2. Connect the oscilloscope to the emitter of Q335.
3. Adjust L336 so that the waveform is flat.

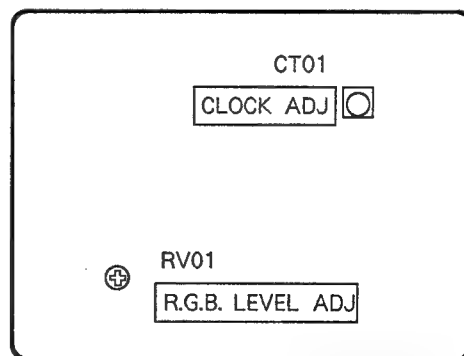


DISCRIMINATION ADJUSTMENT (RV331 and L331)

1. Input a SECAM color bar signal.
2. Connect the oscilloscope to Pin ① of IC331.
3. Adjust RV331 so that the white and black sections of the wave form at Pin ① come to the 0 level.
4. Connect the oscilloscope to Pin ③ of IC331.
5. Adjust L331 so that the white and black sections of the wave form at Pin ③ come to the 0 level.



4-3. V BOARD ADJUSTMENTS



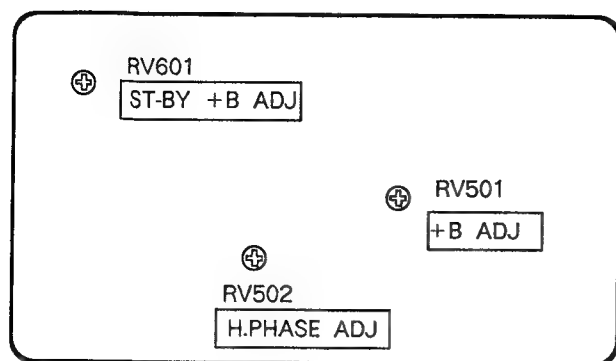
(COMPONENT SIDE)

1. Remove the V-1 connector.
2. Put the system into Text mode.
3. Adjust CT01 so that the picture does not move.

RGB LEVEL ADJUSTMENT (RV01)

1. Maximize the picture setting.
2. Adjust RV01 so that RGB output is 0.75V

4-4. D BOARD ADJUSTMENTS



+B ADJUSTMENT (RV501)

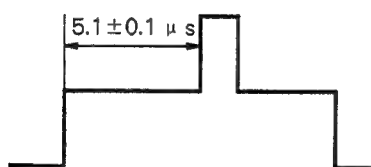
1. Connect the digital multimeter to TP91.
2. Adjust RV501 to obtain $135 \pm 3.0V$.

ST-BY +B ADJUSTMENT (RV601)

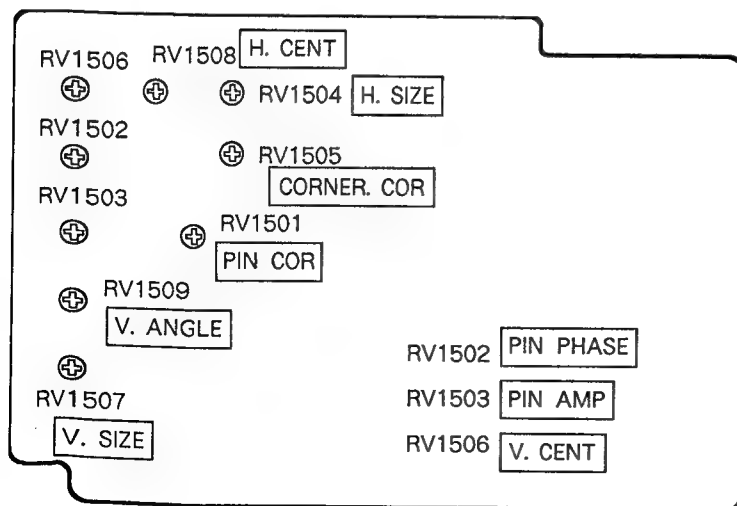
1. Put the system into \odot standby mode (remote commander).
2. Connect the digital multimeter to TP91.
3. Adjust RV601 to obtain $135 \pm 3V$.
4. Take the system out of \odot standby mode (remote commander).

H.PHASE ADJUSTMENT (RV502)

1. Input a PAL color bar signal.
2. Set the picture and brightness controls to their normal levels.
3. Set RV1508 (H. CENT) to its mechanical center.
4. Connect the oscilloscope to pin ⑪ (SCP) of IC501.
5. Rotate RV502 to adjust to $5.1 \pm 0.1 \mu s$.



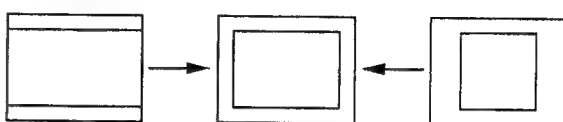
4-5. J1 BOARD ADJUSTMENTS



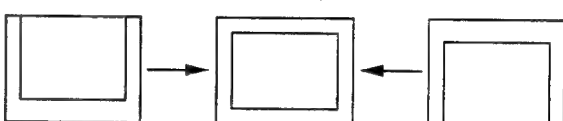
RV1508 H. CENT (HORIZONTAL CENTER)



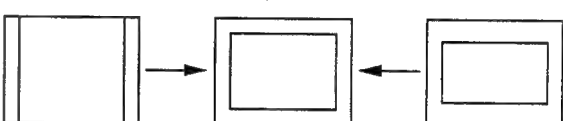
RV1504 H. SIZE (HORIZONTAL SIZE)



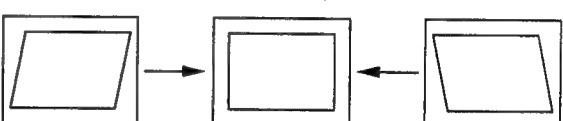
RV1506 V. CENT (VERTICAL CENTER)



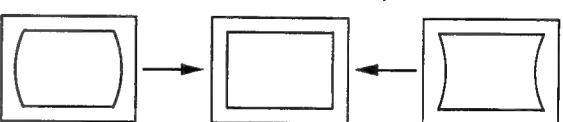
RV1507 V. SIZE (VERTICAL SIZE)



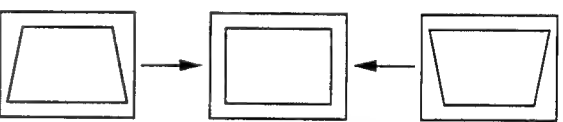
RV1509 V. ANGLE (VERTICAL ANGLE)



RV1503 PIN AMP (PINCUSHION AMPLIFIER)



RV1502 PIN PHASE (PINCUSHION PHASE)

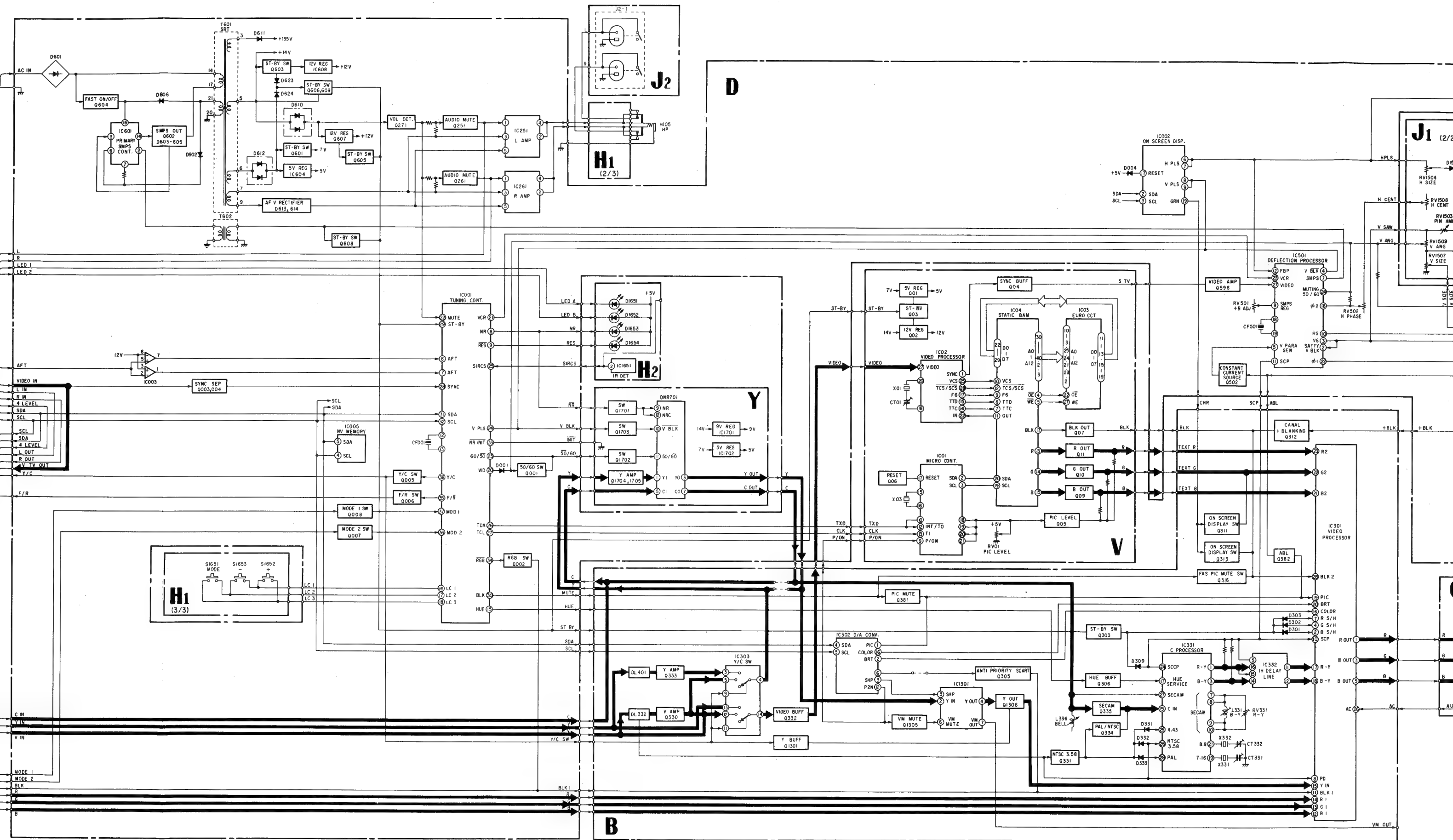


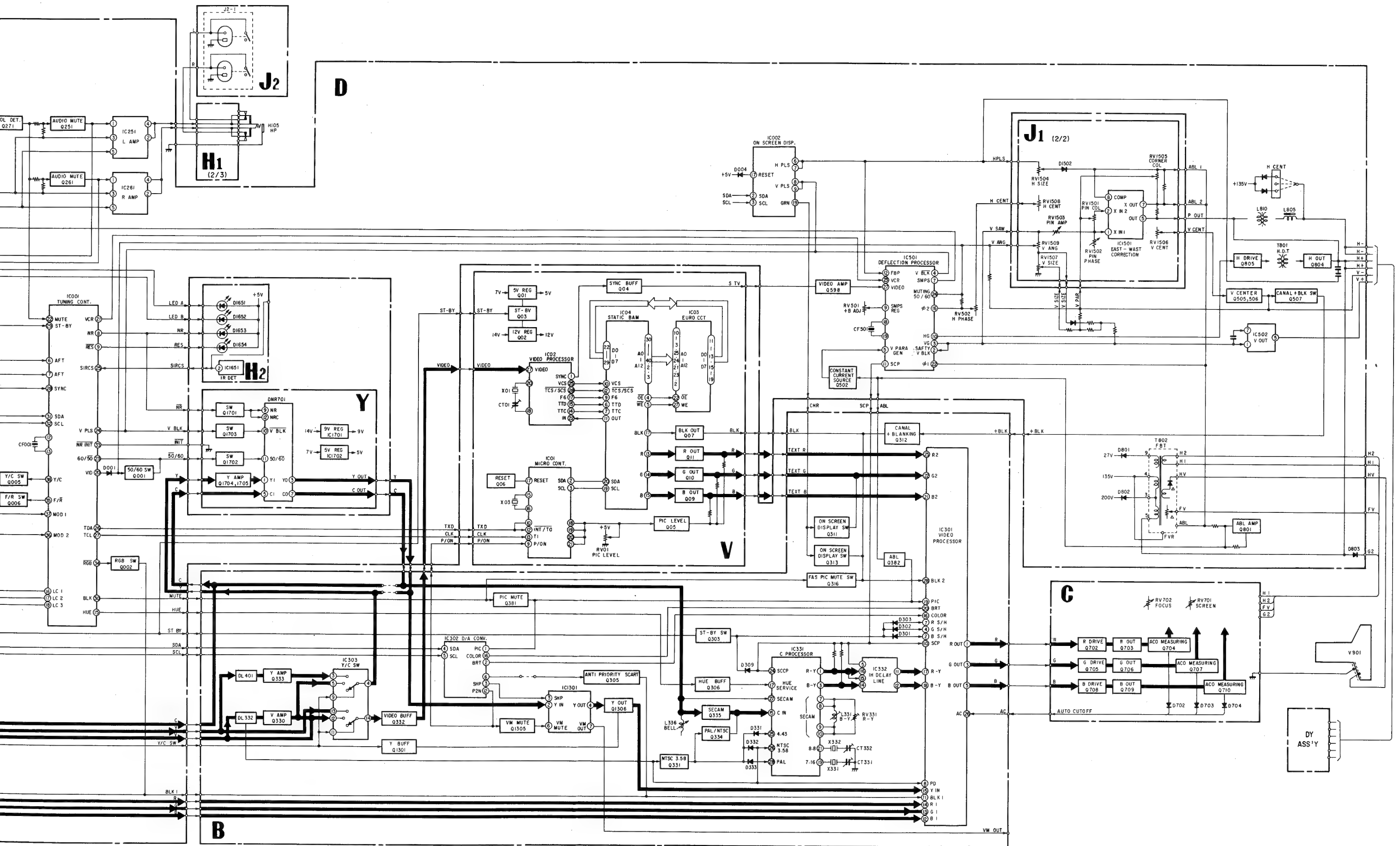
RV1501 PIN. COR (PINCUSHION CORRECT)



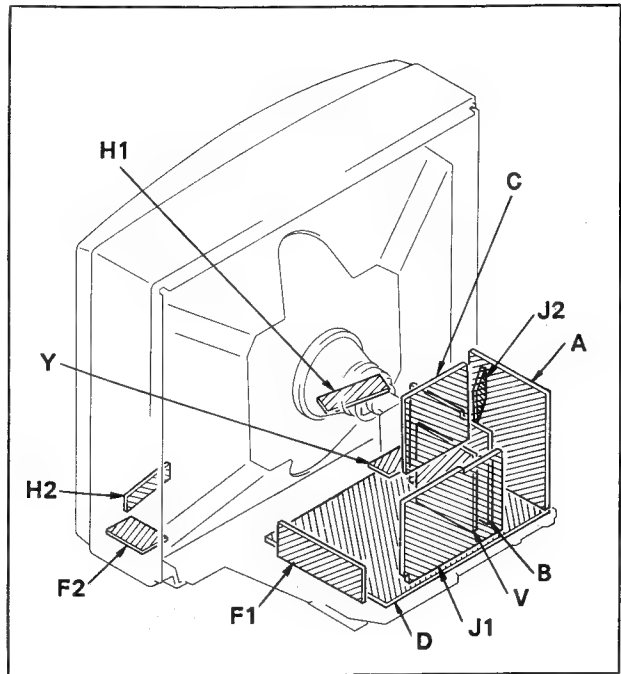
RV1505 CORNER. COR (CORNER CORRECT)








5-2. CIRCUIT BOARDS LOCATION









Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note :

- All capacitors are in μF unless otherwise noted.
 $\text{pF} : \mu\text{F} \quad 50\text{WV}$ or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power: 1/4W

- Chip resistor is in 1/10W.
- All resistors are in ohms. $\text{k}\Omega = 1000\Omega$, $\text{M}\Omega = 1000\text{k}\Omega$
-  : nonflammable resistor.
-  : fusible resistor.
- \triangle : internal component.
-  : panel designation.
- All variable and adjustable resistors have characteristic curve B.unless otherwise noted.
- All voltages are in V.
- Readings are taken with a $10\text{M}\Omega$ digital multimeter.
- Readings are taken with a color-bar signal input.
-  : adjustment for repair.
- Voltage variations may be noted due to normal production tolerances.
-  : B + line.
-  : signal path.

5-3. SCHEMATIC DIAGRAMS AND
PRINTED WIRING BOARDS —Conductor Side—

F1

[LINE FILTER, DGC]

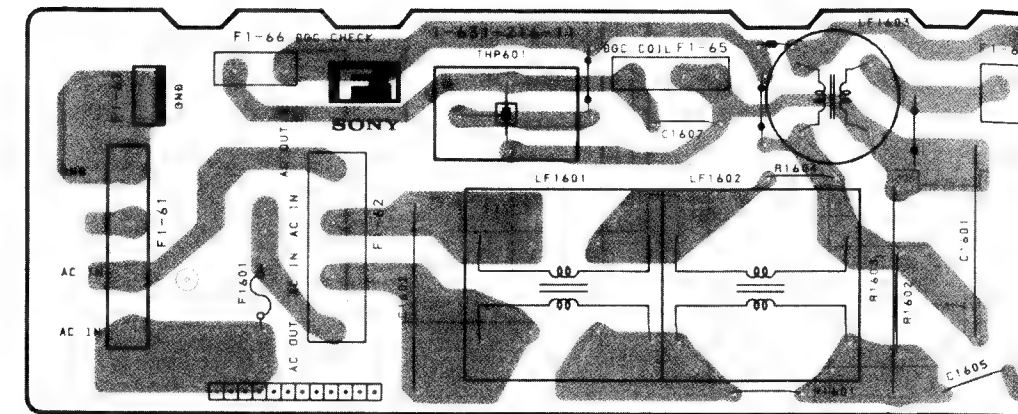
F2

[POWER SWITCH]

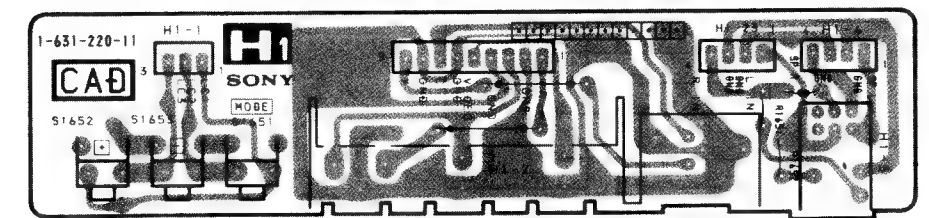
H1

[CONTROL SW
HEADPHONE]

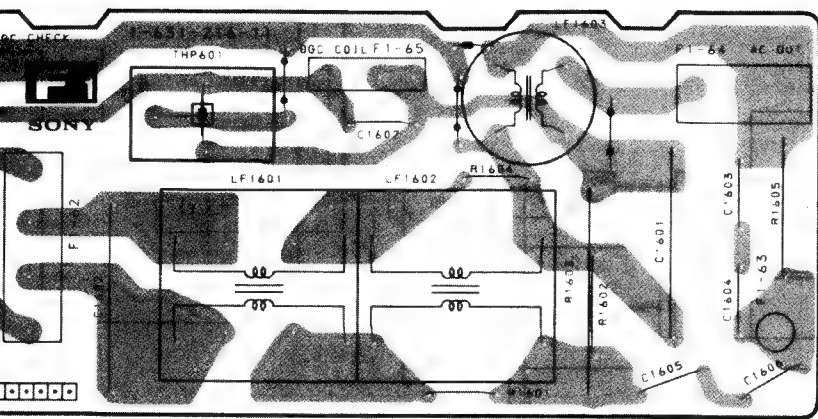
—F1 Board—



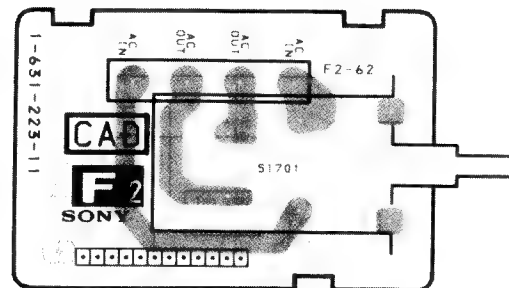
—H1 Board—



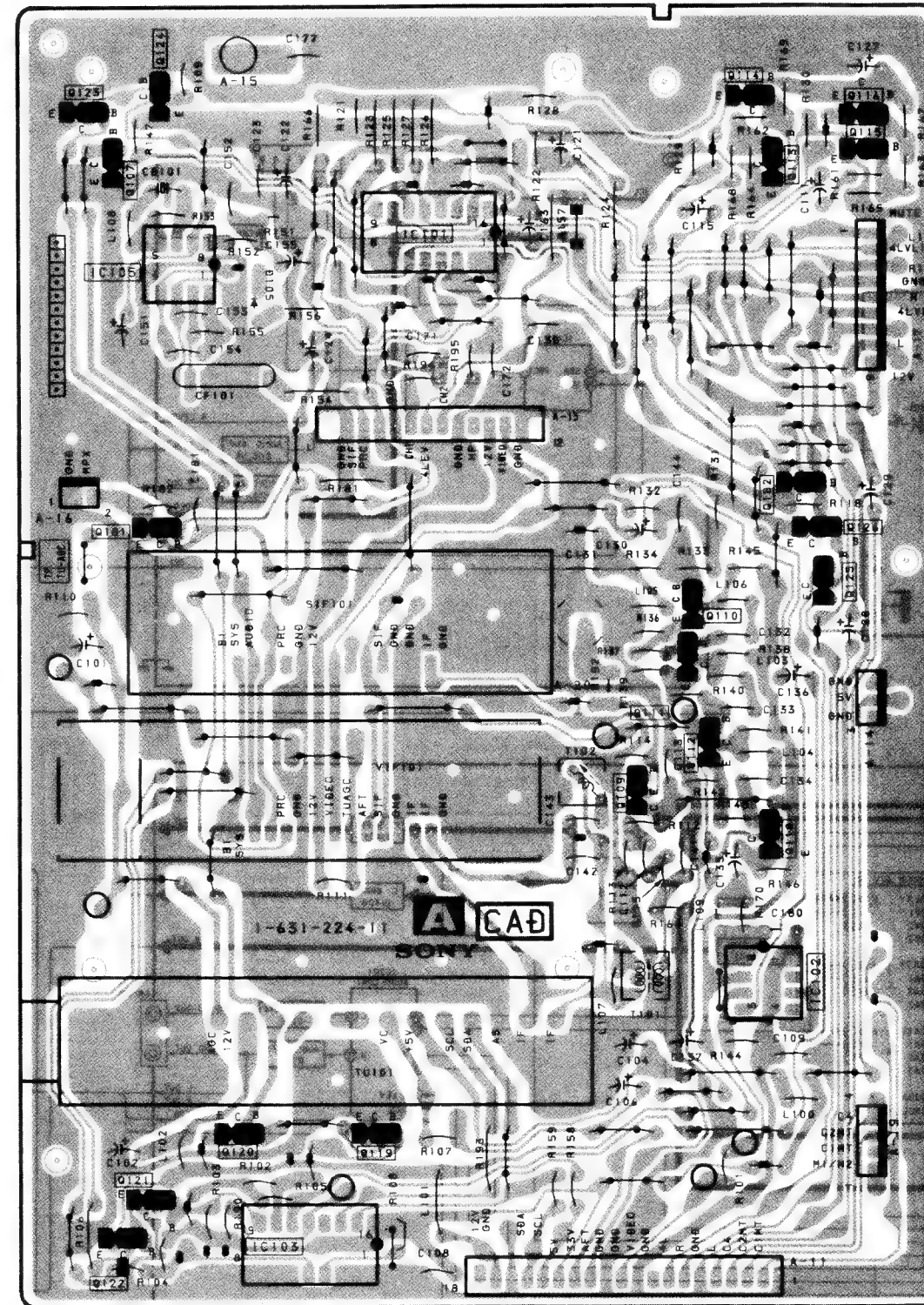
- C]
- F2 [POWER SWITCH]
- H1 [CONTROL SW, AV INPUT, HEADPHONE]
- H2 [SIRCS RECEIVER, INDICATOR]
- A [TUNER, VIF SIF]
- J1 [AUDIO CONTROL, AV INPUT, SCART VIDEO OUT, EAST-WEST CORRECTION]
- J2 [SPEAKER TERMINAL]
- Y [NOISE REDUCTION]



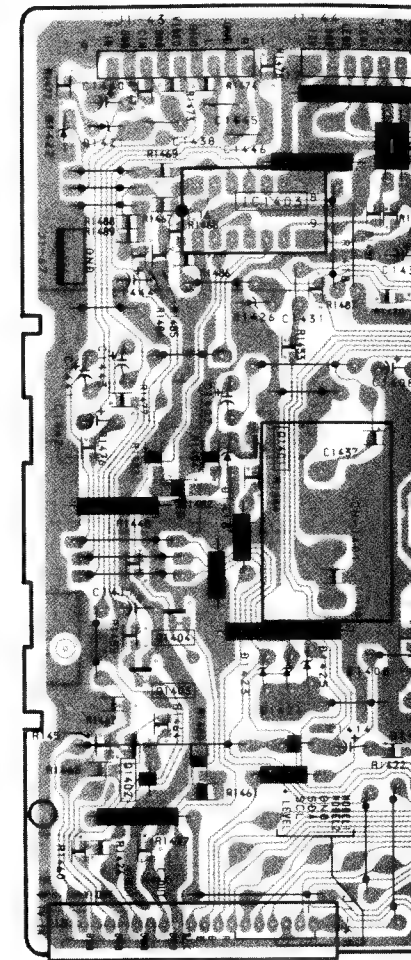
—F2 Board—



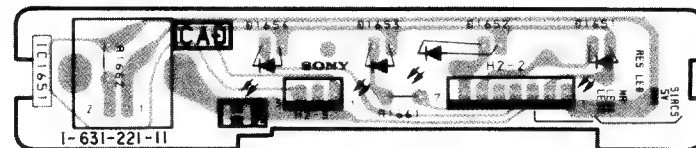
—A Board—



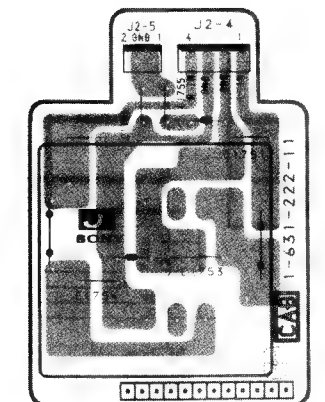
—J1 Board—



—H2 Board—



—J2 Board—



SIRCS RECEIVER,
INDICATOR

A

TUNER,
VIF SIF

J1

AUDIO CONTROL, AV INPUT,
SCART VIDEO OUT,
EAST-WEST CORRECTION

J2

[SPEAKER TERMINAL]

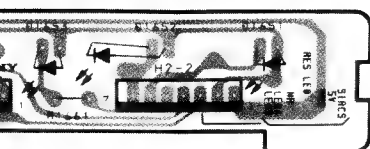
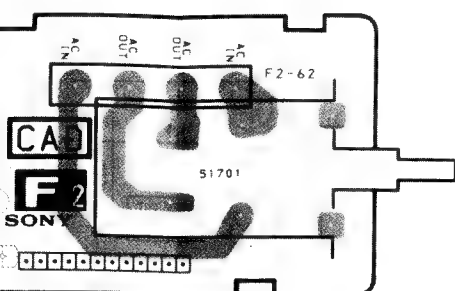
Y

NOISE
REDUCTION

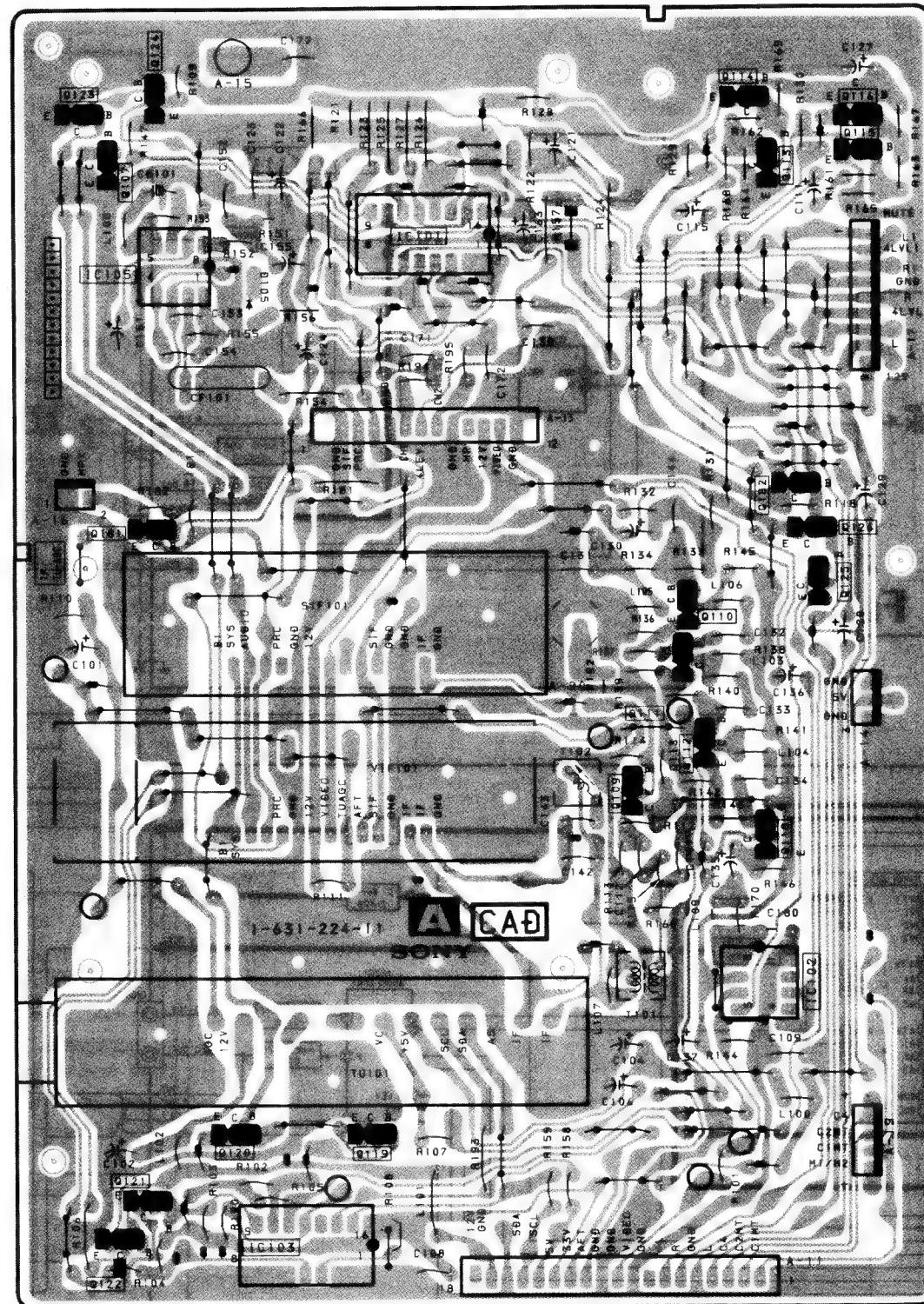
KV-E2511D
RM-689

KV-E2511D
RM-689

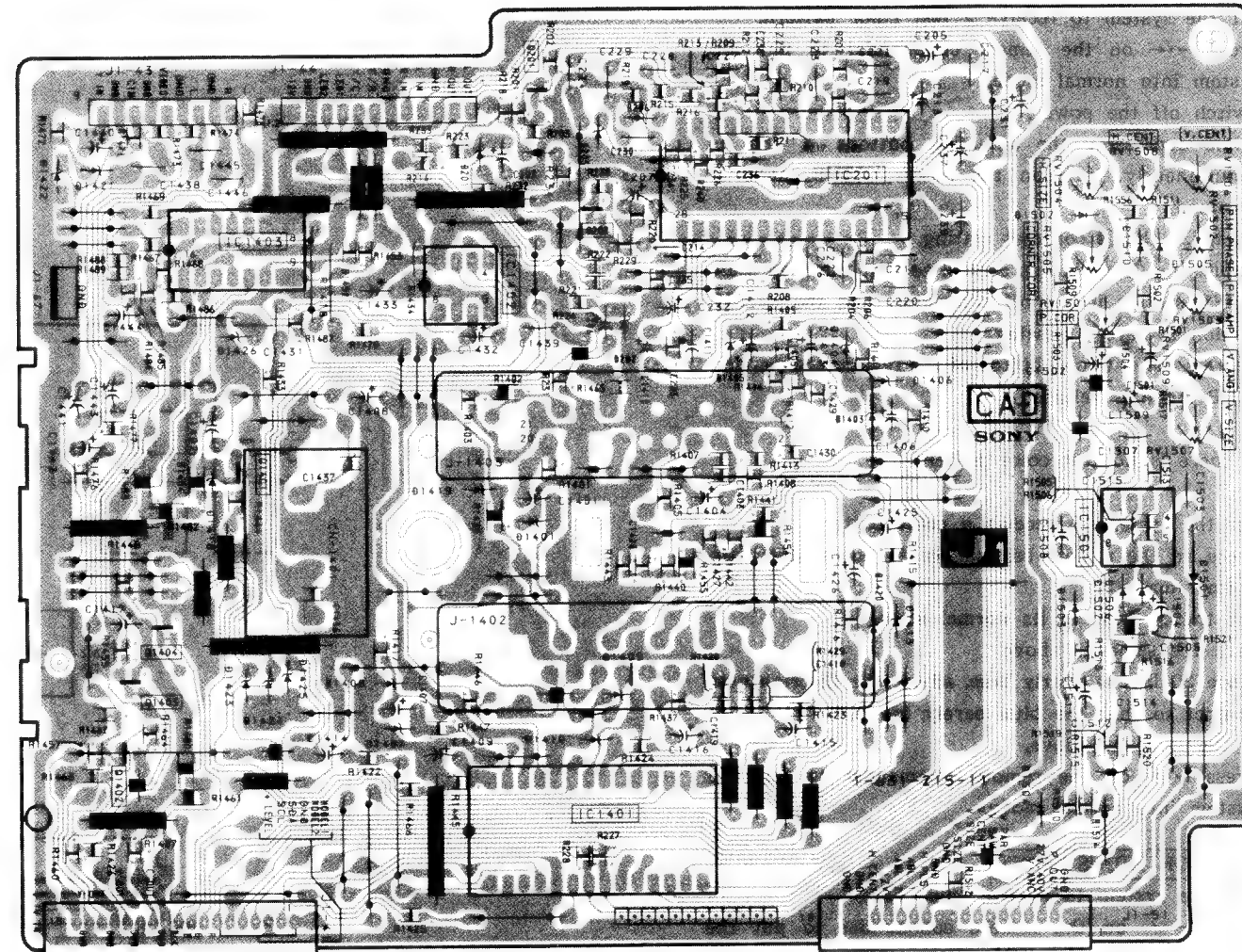
2 Board-



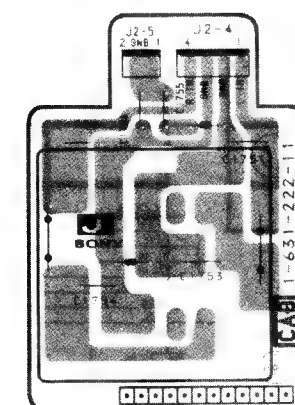
-A Board-



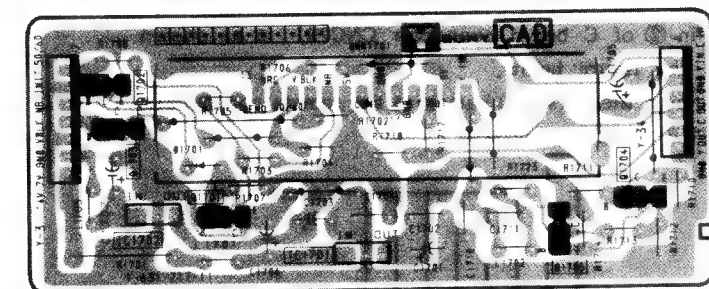
-J1 Board-



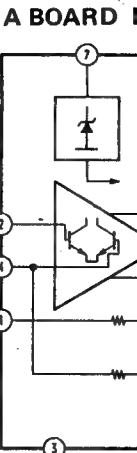
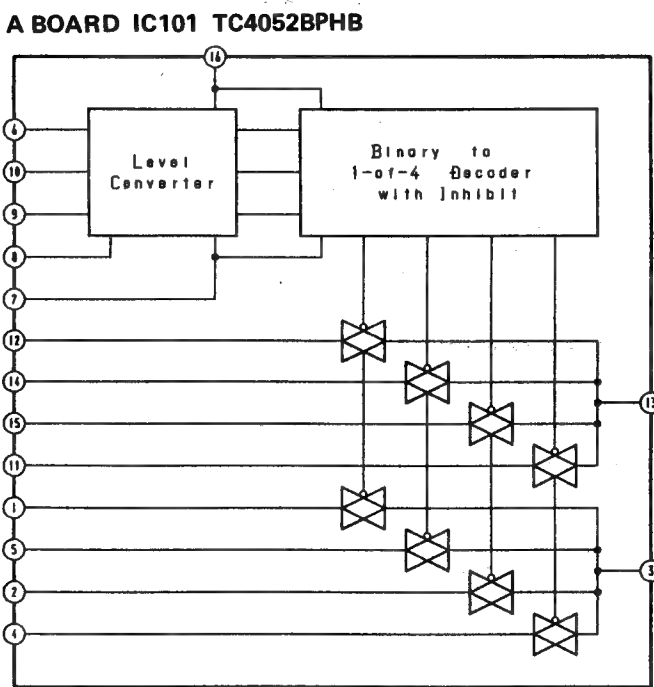
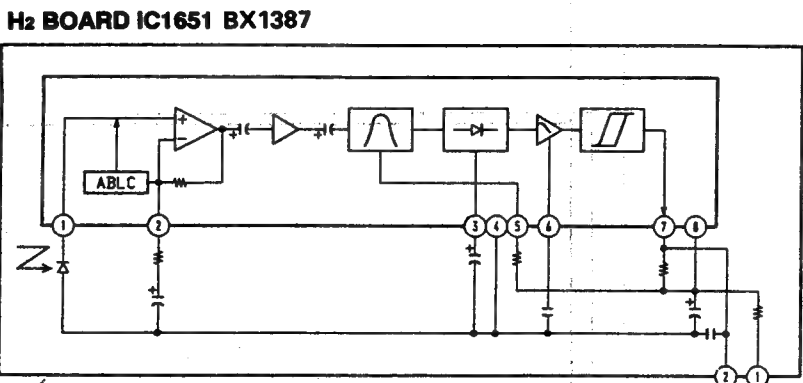
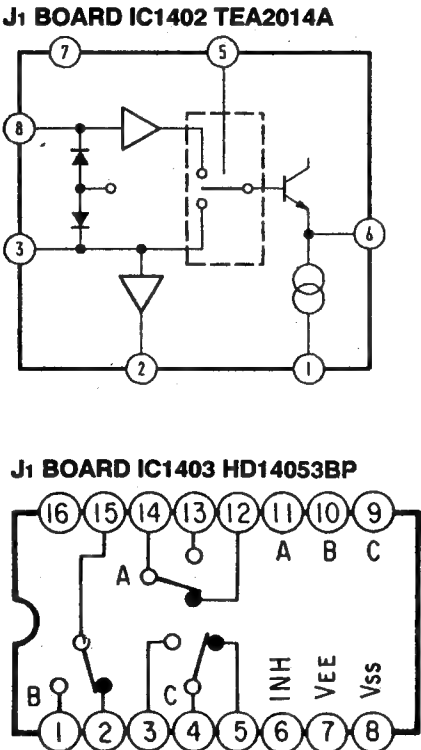
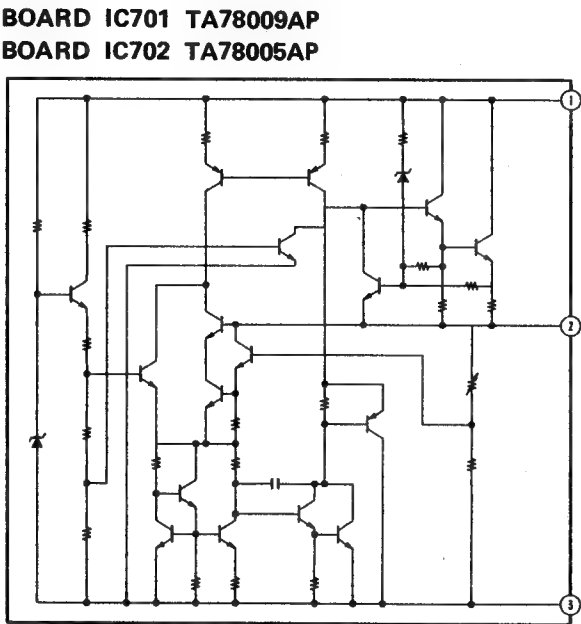
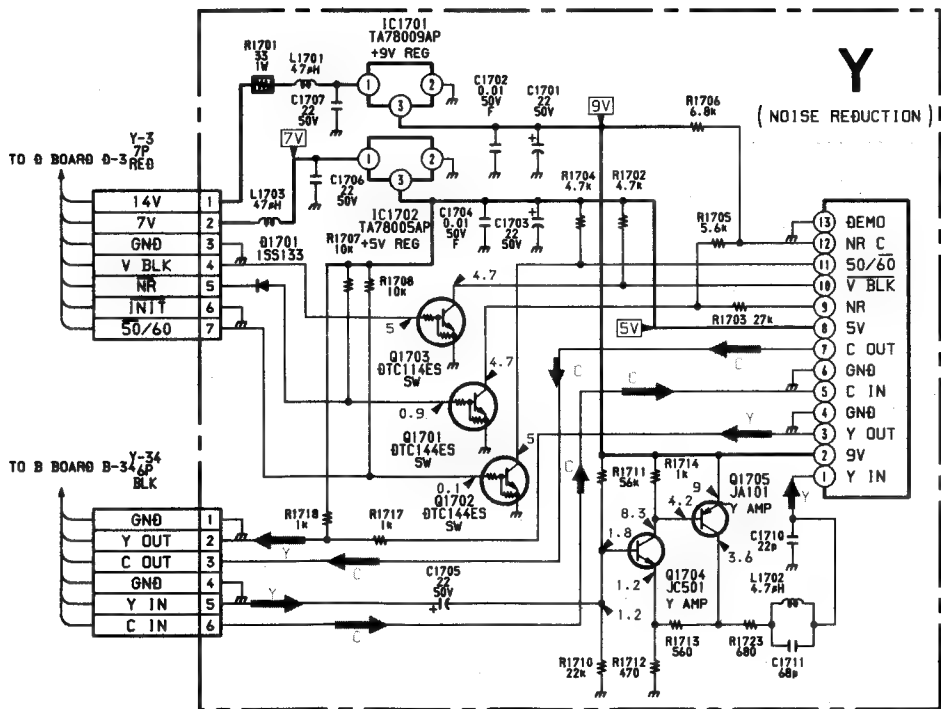
-J2 Board-



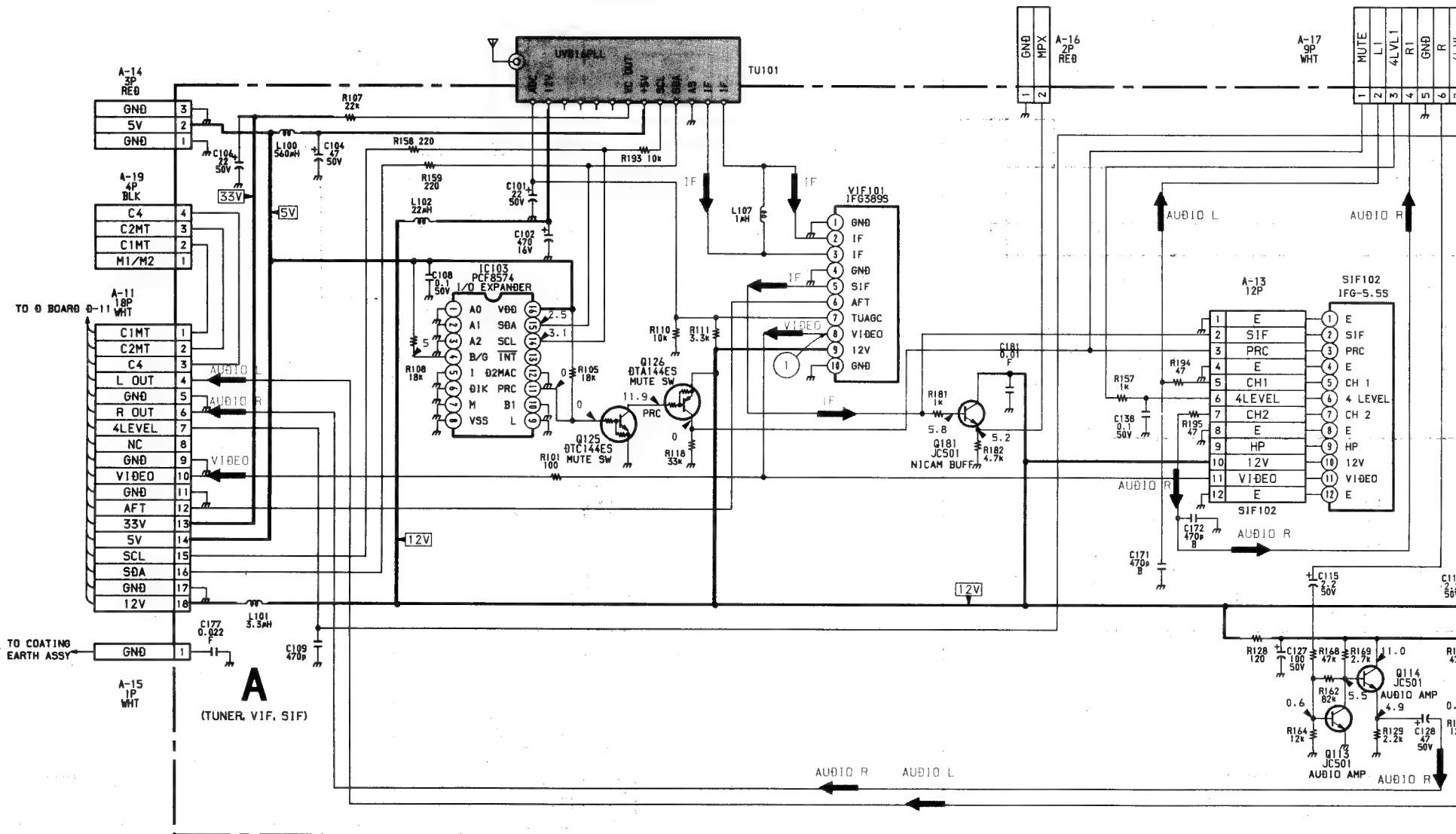
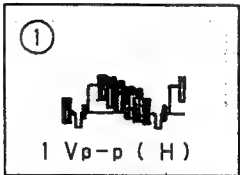
-Y Board-

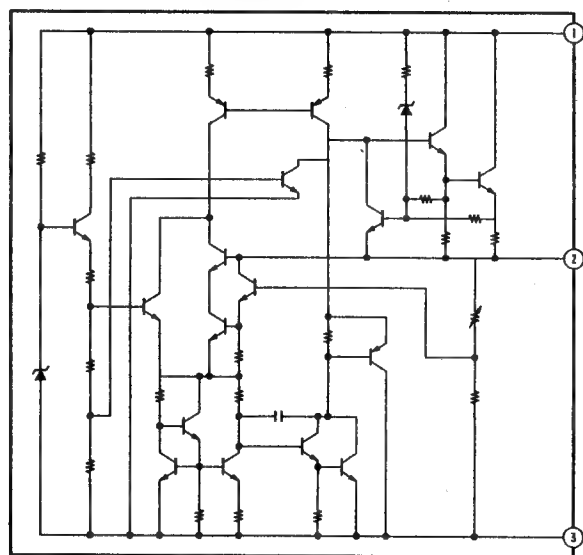
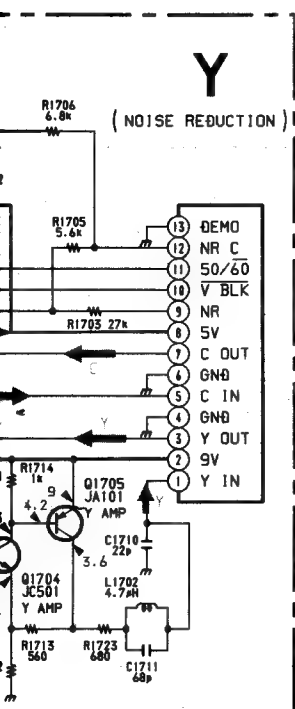
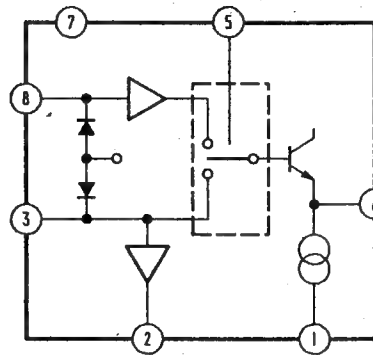
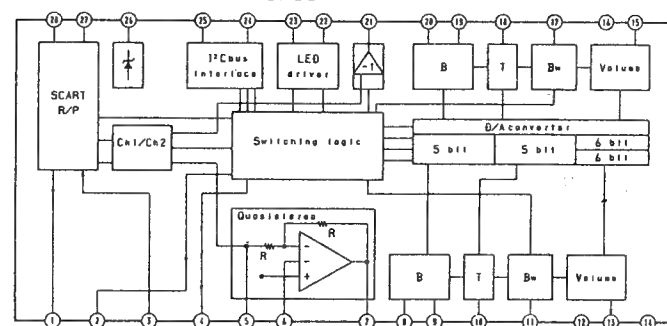
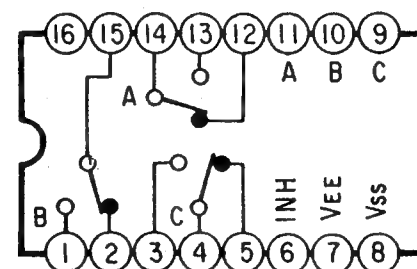
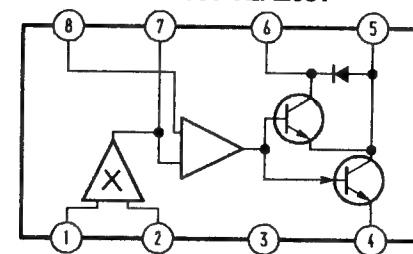




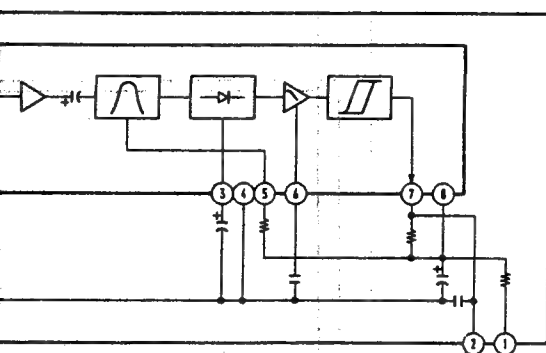


• WAVEFORMS A BOARD

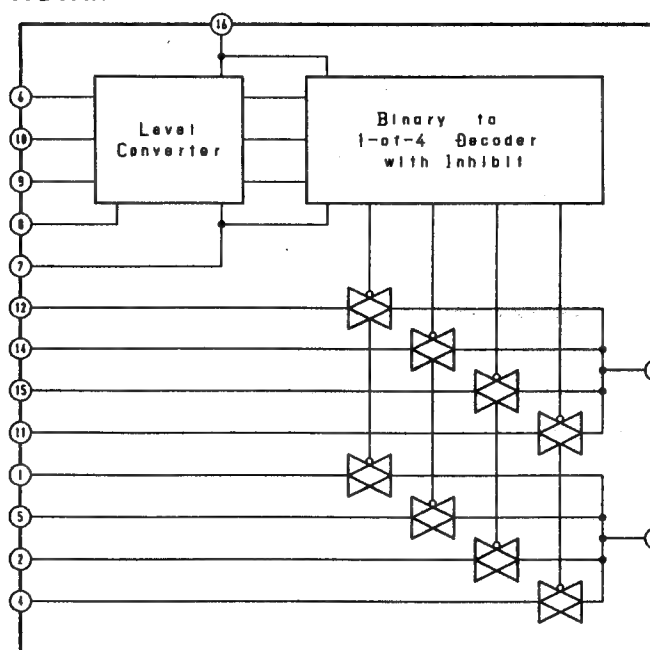
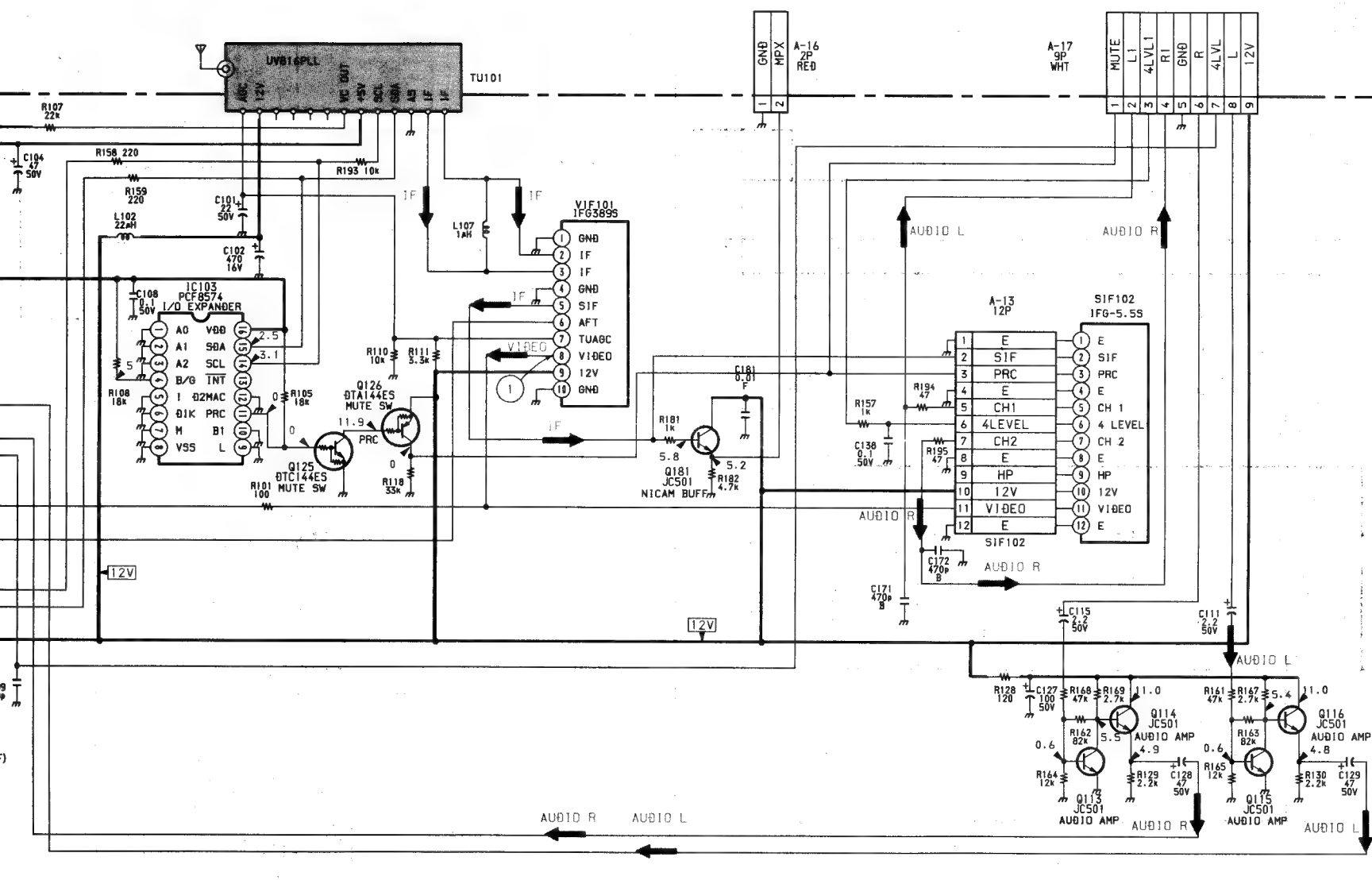
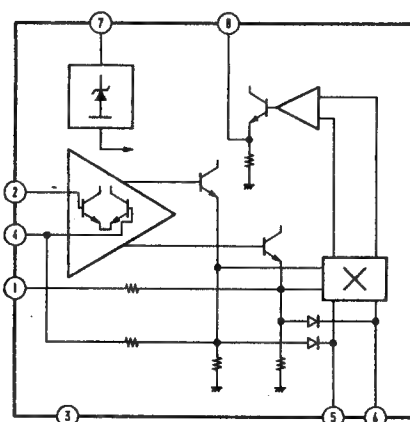


**J1 BOARD IC1402 TEA2014A****J1 BOARD IC201 TDA6200****J1 BOARD IC1403 HD14053BP****J1 BOARD IC1501 TEA2031**

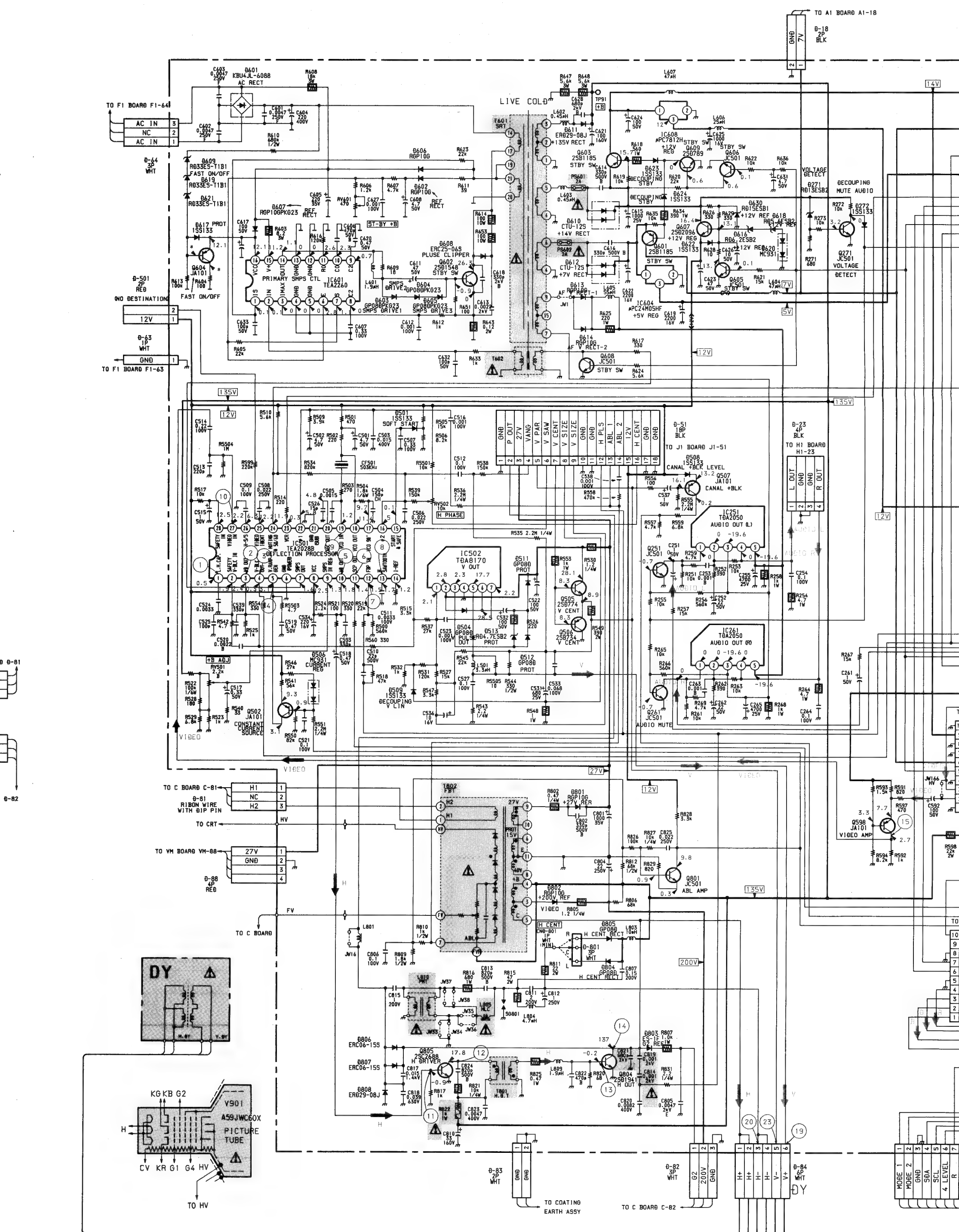
K1387

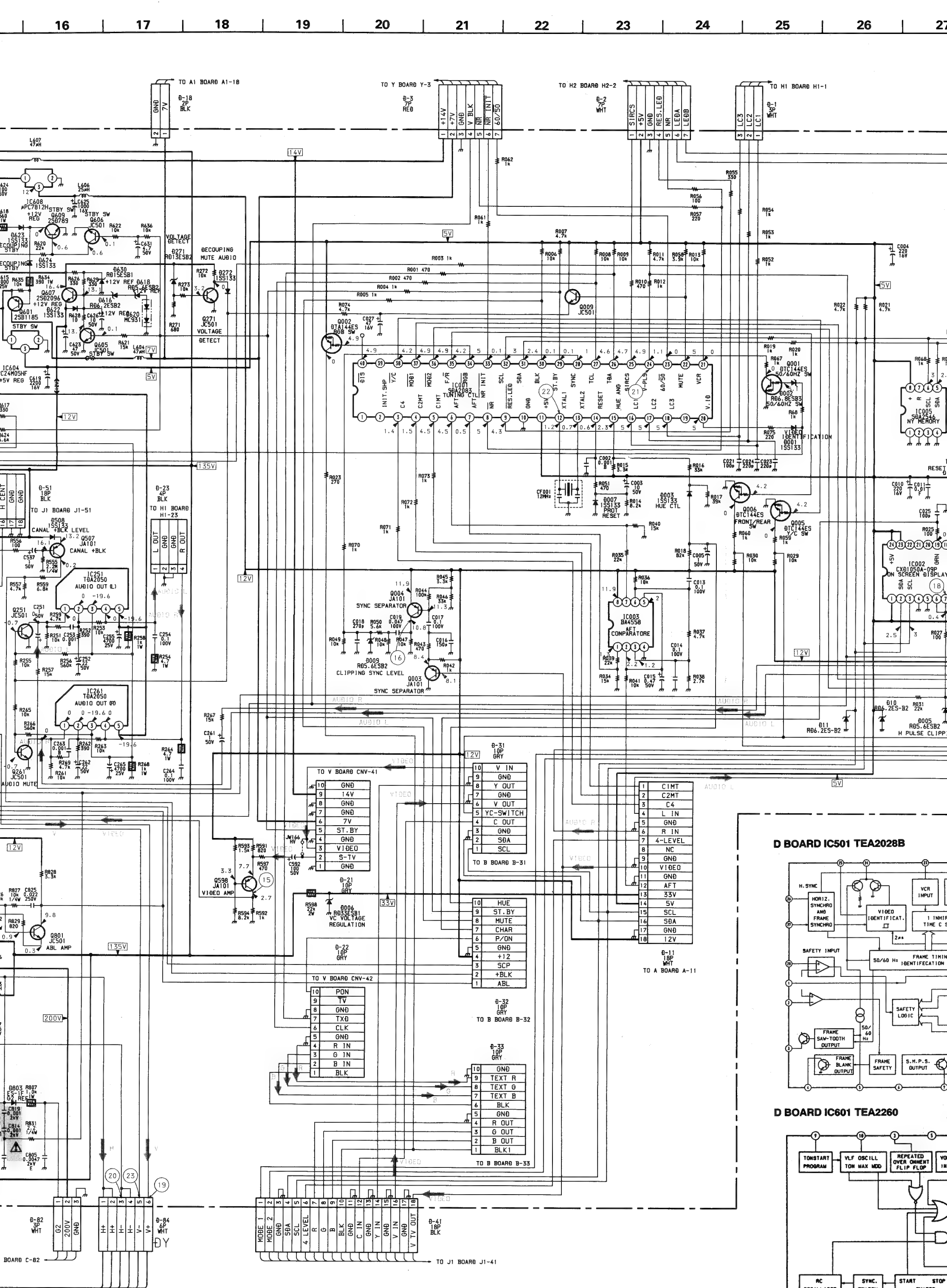


A BOARD

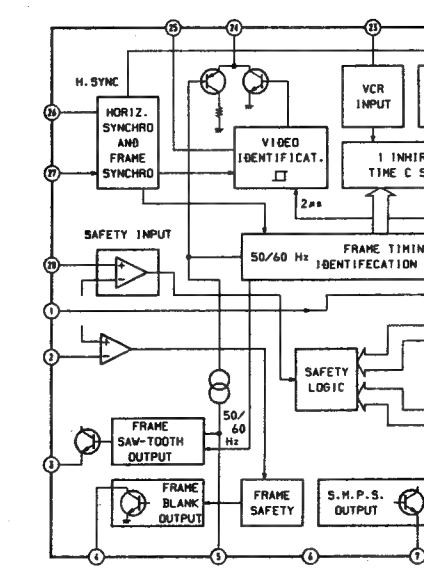
**A BOARD IC101 TC4052BPHB****A BOARD IC105 TBA129**

— 33 —

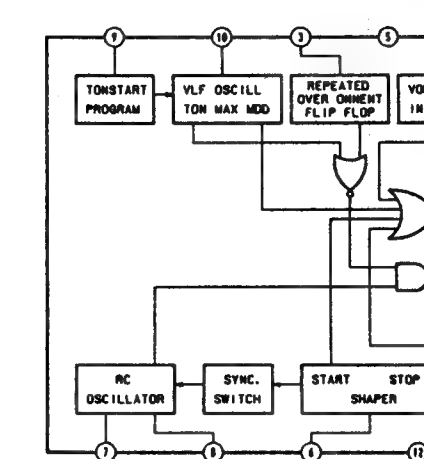


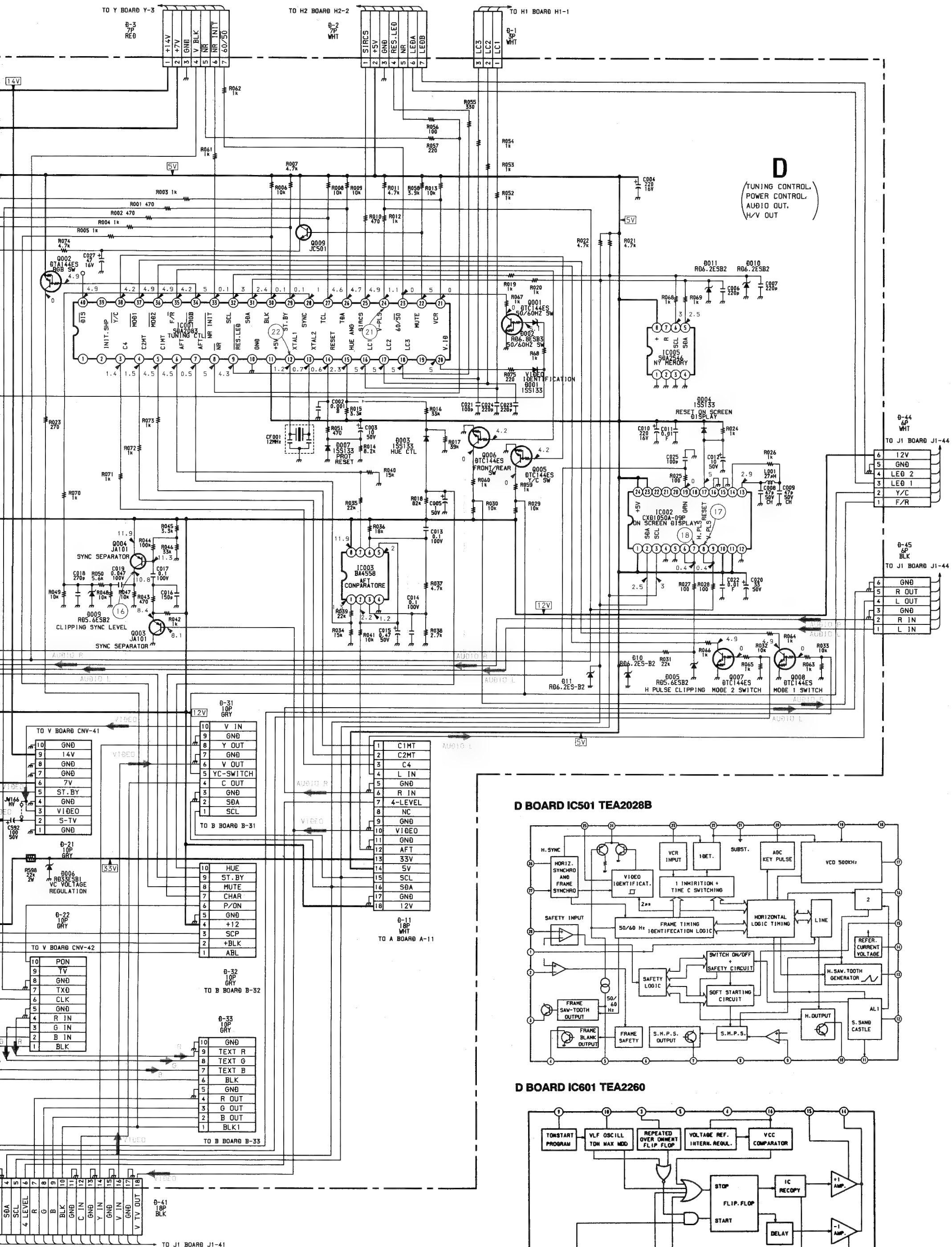


D BOARD IC501 TEA2028B



D BOARD IC601 TEA2260



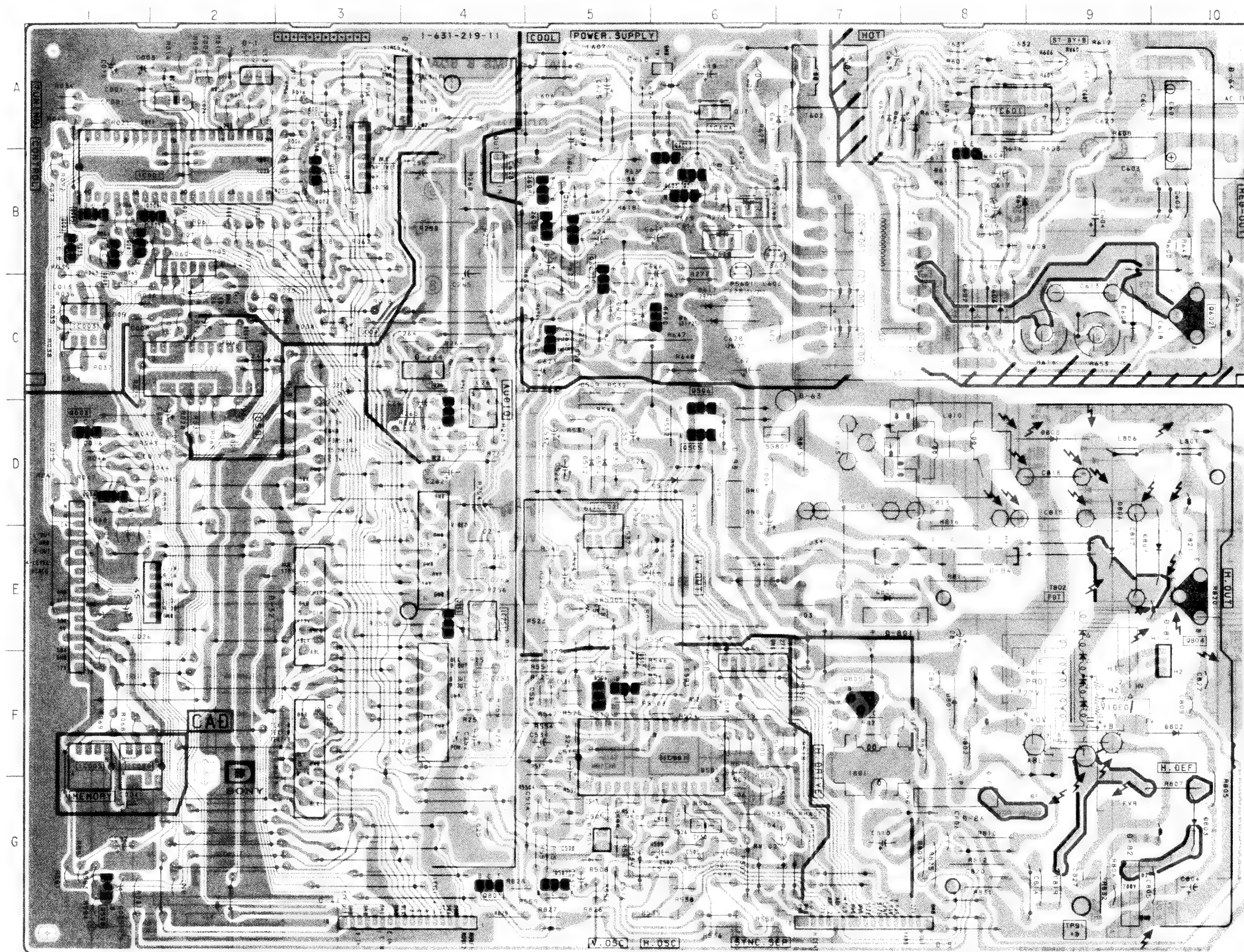


D [TUNING CONTROL, POWER CONTROL]
[AUDIO OUT, H/V OUT]

-D Board-

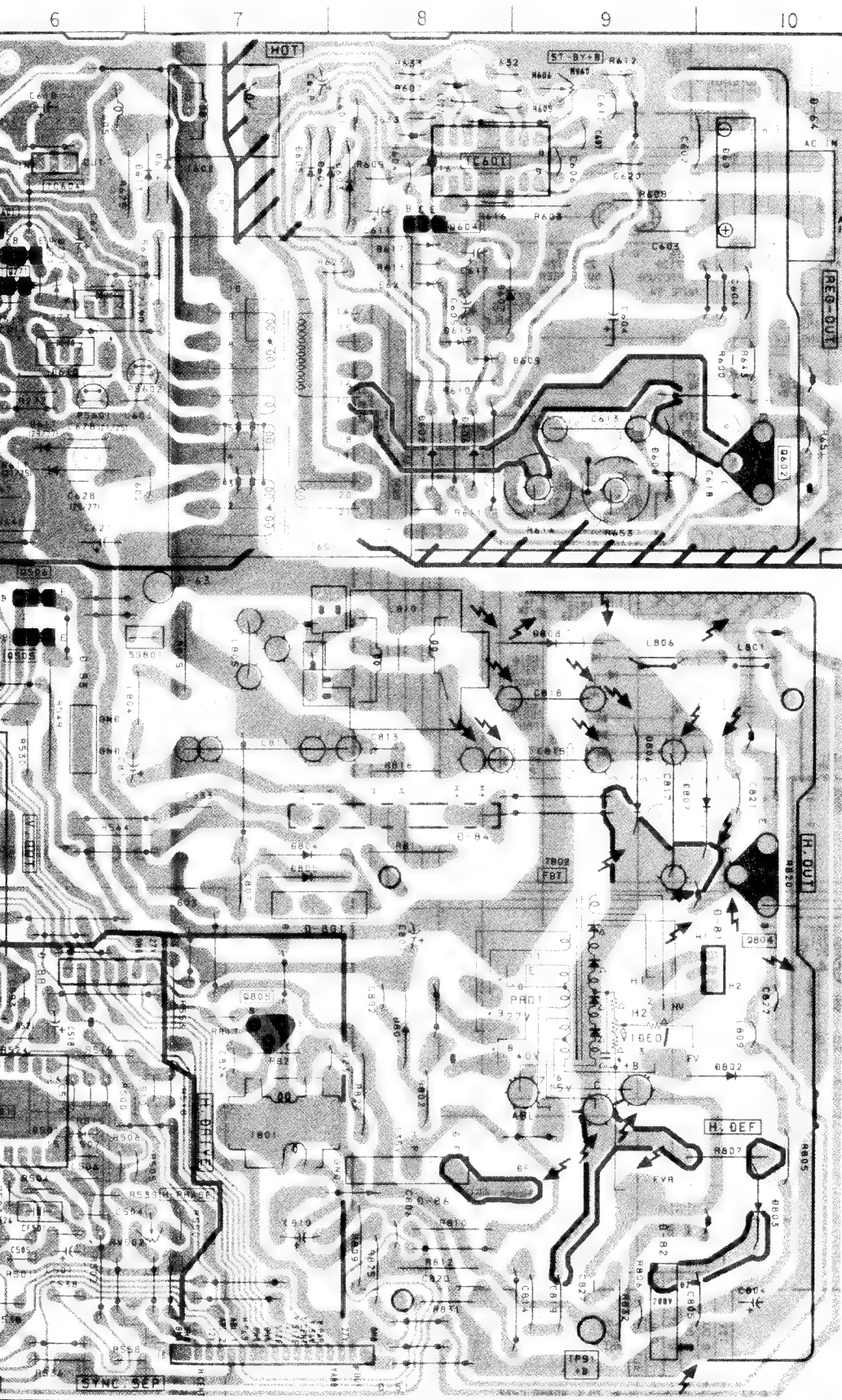
KV-E2511D
RM-689

KV-E2511D
RM-689



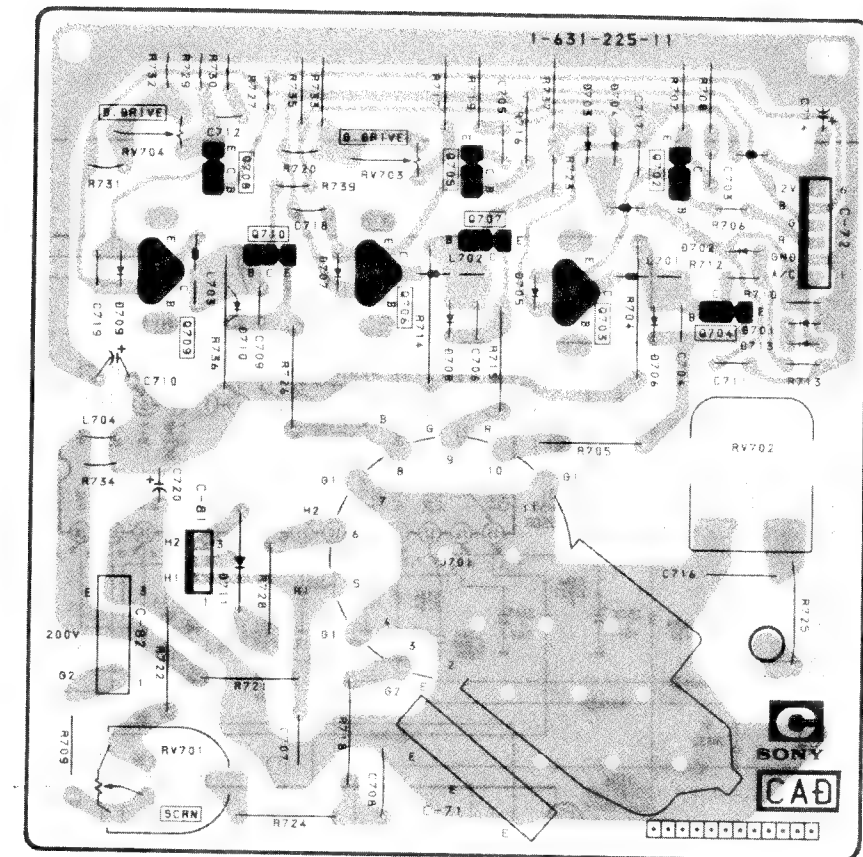
D BOARD

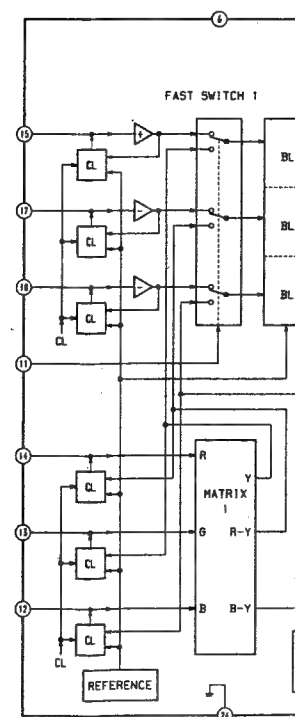
IC		DIODE			
IC001	B-1	0001	A-3		
IC002	C-2	0002	B-3	0803	G-10
IC003	C-1	0003	A-3	0804	E-7
IC005	F-1	0004	C-2	0805	E-7
IC006	F-1	0005	G-1	0806	0-9
IC251	E-4	0006	E-1	0806	E-9
IC261	C-4	0007	A-2	0807	0-9
IC501	F-6	0008	C-2	0808	E-10
IC502	0-6	0009	0-1	VARIABLE RESISTOR	
IC601	A-8	0010	B-2		
IC604	A-6	0011	B-2	RV501	E-5
IC608	B-4	0271	B-6	RV502	G-6
TRANSISTOR		0272	B-4	RV601	A-9
		0501	F-6	TEST POINT	
Q001	B-3	0504	0-5		
Q002	B-1	0506	F-5	TP91	G-9
Q003	0-1	0508	G-5		
Q004	0-1	0509	C-5		
Q005	B-1	0511	0-9		
Q006	B-1	0512	0-5		
Q007	B-1	0513	0-5		
Q008	B-1	0601	A-10		
Q009	B-1	0602	C-8		
Q251	E-4	0603	A-8		
Q261	C-4	0604	A-7		
Q271	B-6	0605	A-7		
Q502	F-5	0606	C-8		
Q505	0-6	0607	B-8		
Q506	C-6	0608	C-9		
Q507	G-5	0609	B-8		
Q601	A-6	0610	B-6		
Q602	C-10	0611	C-6		
Q603	B-6	0612	B-6		
Q604	B-7	0613	A-6		
Q605	C-5	0614	A-7		
Q606	B-5	0616	C-5		
Q607	B-5	0617	B-8		
Q608	B-5	0618	C-5		
Q609	B-5	0619	B-8		
Q598	G-1	0620	C-6		
Q801	G-4	0621	B-8		
Q804	E-10	0622	C-5		
Q805	F-7	0623	B-5		
		0624	B-5		
		0630	C-5		
		0801	F-8		
		0802	F10		



D BOARD

IC		DIODE			
IC001	B-1	0001	A-3	0803	G-10
IC002	C-2	0002	B-3	0804	E-7
IC003	C-1	0003	A-3	0805	E-7
IC005	F-1	0004	C-2	0806	0-9
IC006	F-1	0005	G-1	0806	E-9
IC251	E-4	0006	E-1	0807	0-9
IC261	C-4	0007	A-2	0808	E-10
IC501	F-6	0008	C-2	VARIABLE RESISTOR	
IC502	0-6	0009	0-1		
IC601	A-8	0010	B-2		
IC604	A-6	0011	B-2		
IC608	B-4	0271	B-6	RV501	E-5
TRANSISTOR		0272	B-4	RV502	G-6
		0501	F-6	RV601	A-9
		0504	0-5	TEST POINT	
		0506	F-5		
Q001	B-3	0508	G-5		
Q002	B-1	0509	C-5		
Q003	0-1	0511	0-9	TP91	G-9
Q004	0-1	0512	0-5		
Q005	B-1	0513	0-5		
Q006	B-1	0601	A-10		
Q007	B-1	0602	C-8		
Q008	B-1	0603	A-8		
Q009	B-1	0604	A-7		
Q251	E-4	0605	A-7		
Q261	C-4	0606	C-8		
Q271	B-6	0607	B-8		
Q502	F-5	0608	C-9		
Q505	0-6	0609	B-8		
Q506	C-6	0610	B-6		
Q507	G-5	0611	C-6		
Q601	A-6	0612	B-6		
Q602	C-10	0613	A-6		
Q603	B-6	0614	A-7		
Q604	B-7	0616	C-5		
Q605	C-5	0617	B-8		
Q606	B-5	0618	C-5		
Q607	B-5	0619	B-8		
Q608	B-5	0620	C-6		
Q609	B-5	0621	B-8		
Q598	G-1	0622	C-5		
Q801	G-4	0623	B-5		
Q804	E-10	0624	B-5		
Q805	F-7	0630	C-5		
		0801	F-8		
		0802	F10		

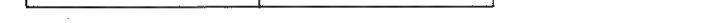
C [R · G · B OUT]
-C Board-



[illegible]

127	7:3	1:3	1:3	1:3
-----	-----	-----	-----	-----

• WAVEFORMS B BOARD

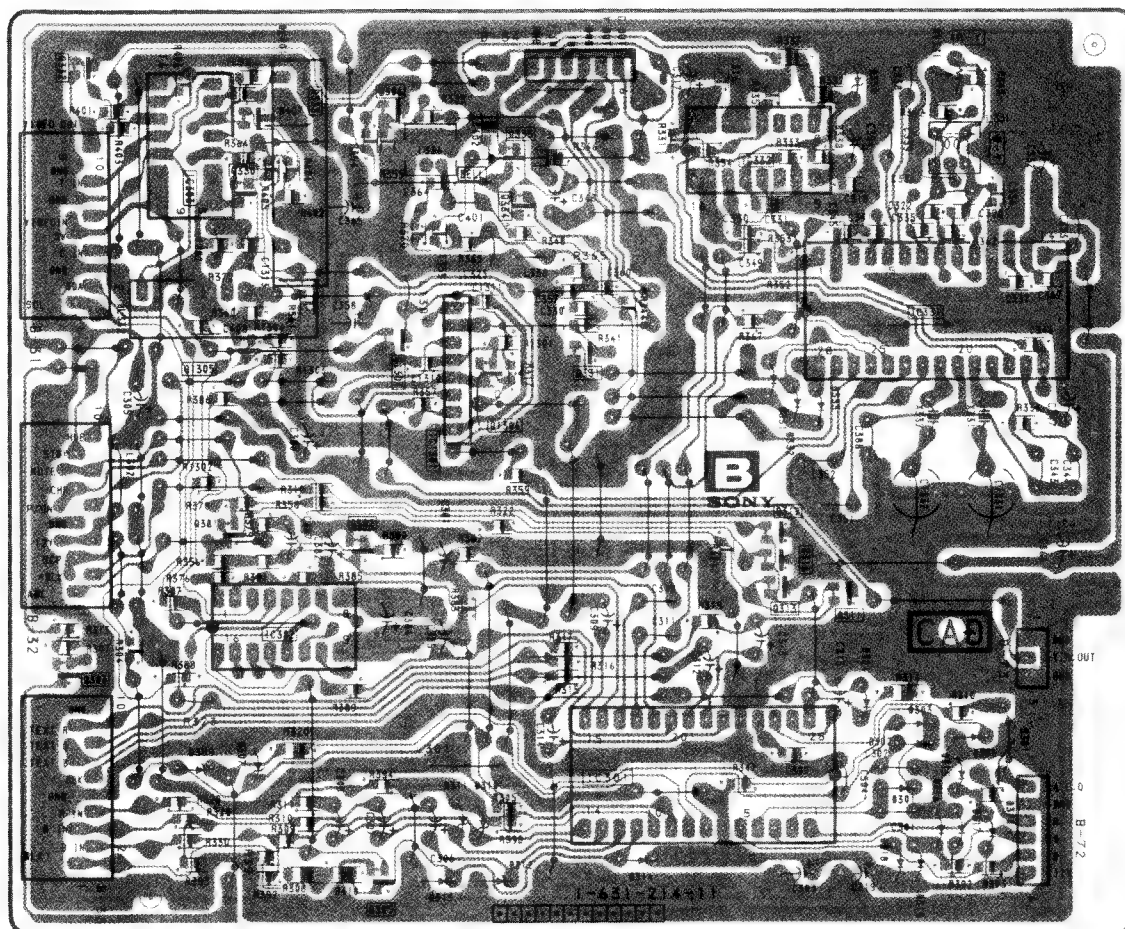


B BOARD IC301 TDA4580

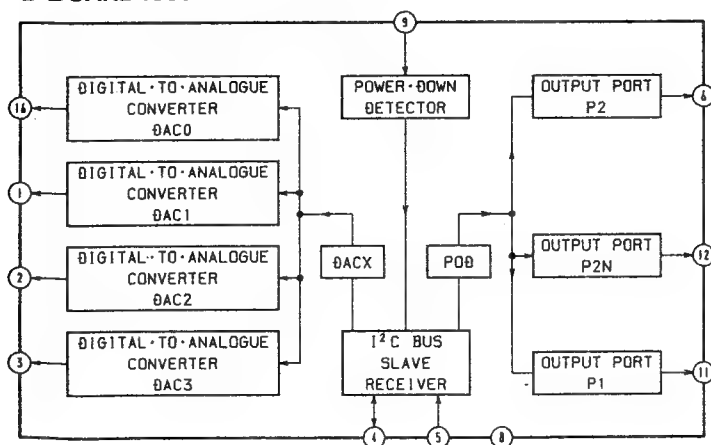


B [CHROMA
DECODER]

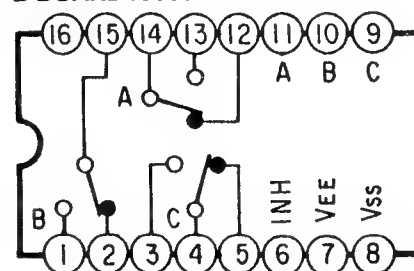
—B Board—



B BOARD IC302 TDA8442-N3

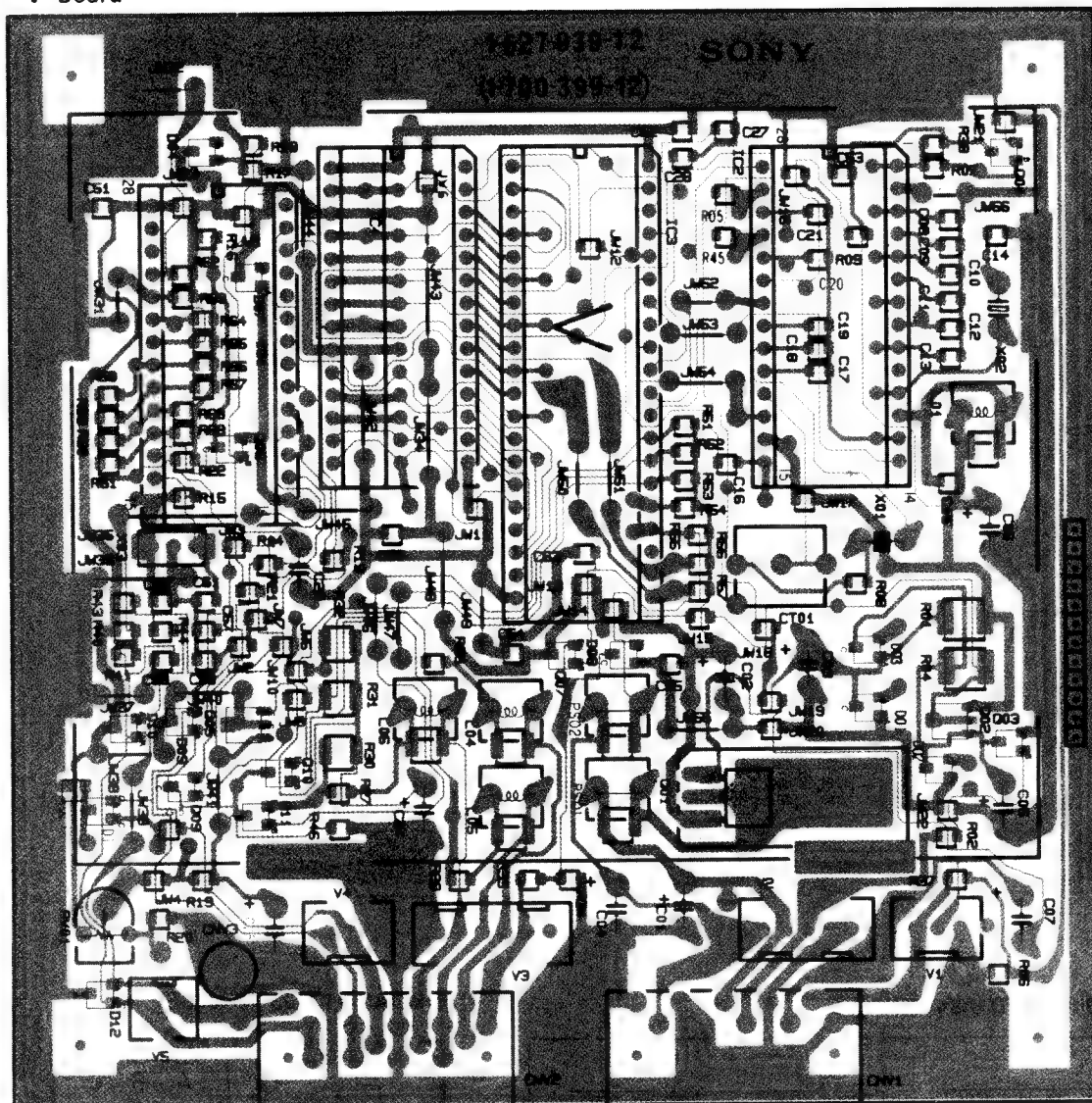


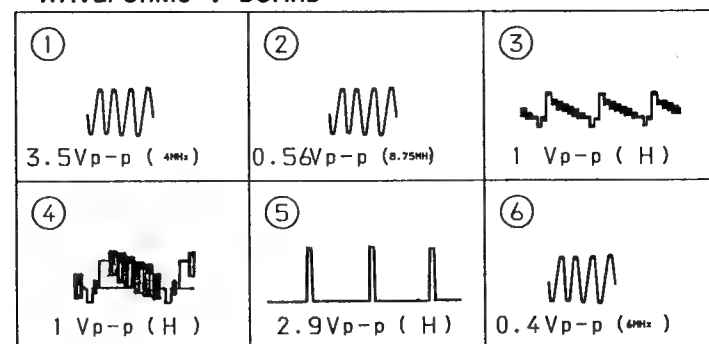
B BOARD IC303 TC4053BP





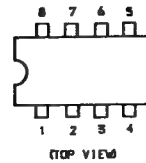
— V Board —



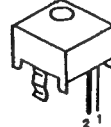


SECTION 6
EXPLODED VIEWS

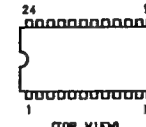
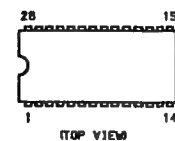
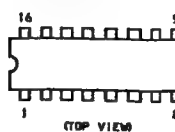
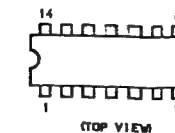
5-4. SEMICONDUCTORS

BA4558
RC4558P
S0A2546
TEA2014
TEA2031A

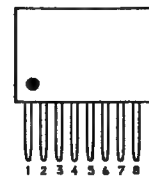
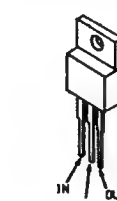
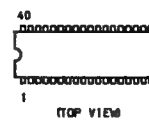
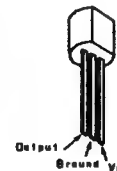
BX1387



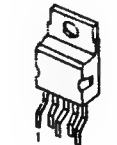
CXA1050A

CXA1114P
T0A4580
T0A4650
T0A6200
TEA2028B
2AA5231-V6
SMAB8461P-W177
TMM2063P-70H014040BP
H014053BP
PCF8574P
TC4040BP
TC4053BP
T0A4660
T0A8442-N3
TEA2260H014584BP
AP04584BC

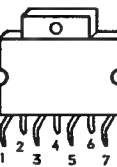
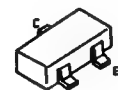
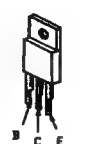
HIC2110

MSF7805
RC7809FA
RC7812FA
PC24M05HF
PC7812HS0A5243
SAB2083TA78005AP
TA78009AP

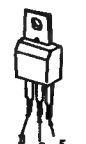
T0A2500



T0A8170

0TA144ES
0TC114ES
2SA11620TC124EK
MMST2907A
2SA1162GJA101
JC501
2SA1091
2SA733
2SB7892SB1185
2SB17612SB1913SA
2SB12742SB734
2SB774

2SC1761

2SC2611
2SC2688

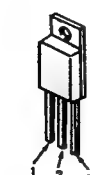
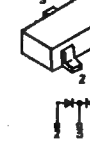
2SC2785

2SC2873Y
2SD16232SD1548-LB
2SD1941

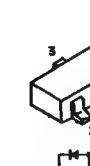
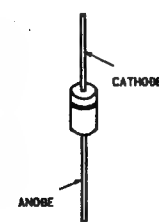
2SD2096



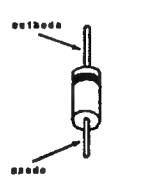
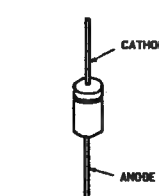
CTU-125

MA152WK
0AN202K

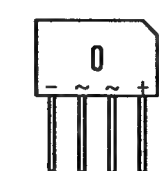
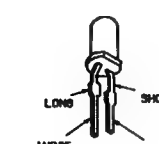
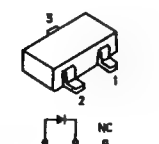
0AP-202K

ERC06-15S
ERC25-06S
RU-3AM

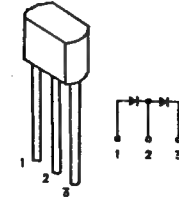
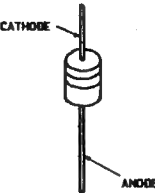
ER029-08J

ES1F
GP080
RGP10G

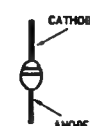
KBU4JL-6088

LB-210VR
SEL-1222R-CMA3036H
MA3056M
MA3068M
MA3130L
R03.6M-B2
R06.8M-B2
R013M-B1
R05.6M-B2

MC931

R010ES-B3
R011ES-B3
R013ES-B2
R015ES-B1
R033ES-B1
R036ES-B4
R04.7ES-B2
R05.6ES-B2
R05.6ES-B3
R06.2ES-B2
R06.8ES-B3
R07.5ES-B3
R09.1ES-B2
R09.1ES-B3
1SS119
1SS133

U05G



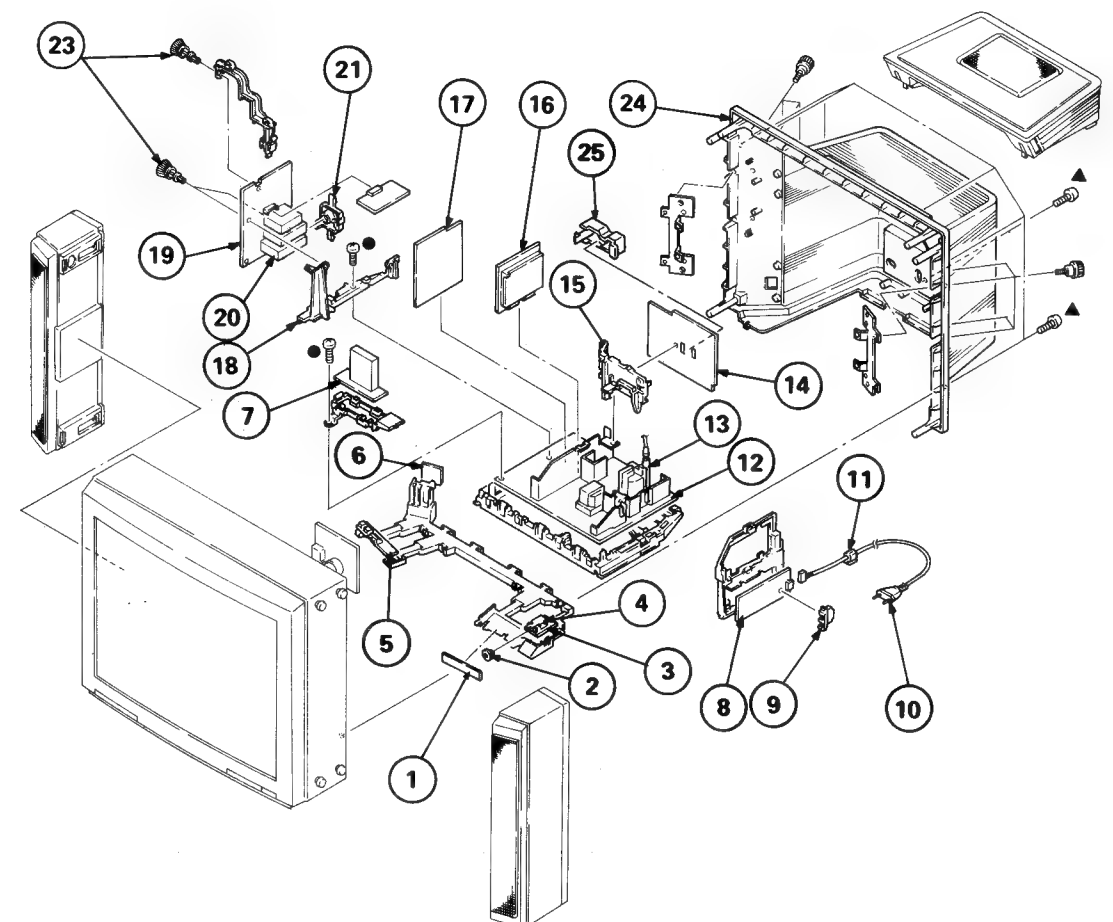
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

6-1. CHASSIS

●: BVTP3 × 12 7-685-648-79

▲: BVTP4 × 16 7-685-663-79

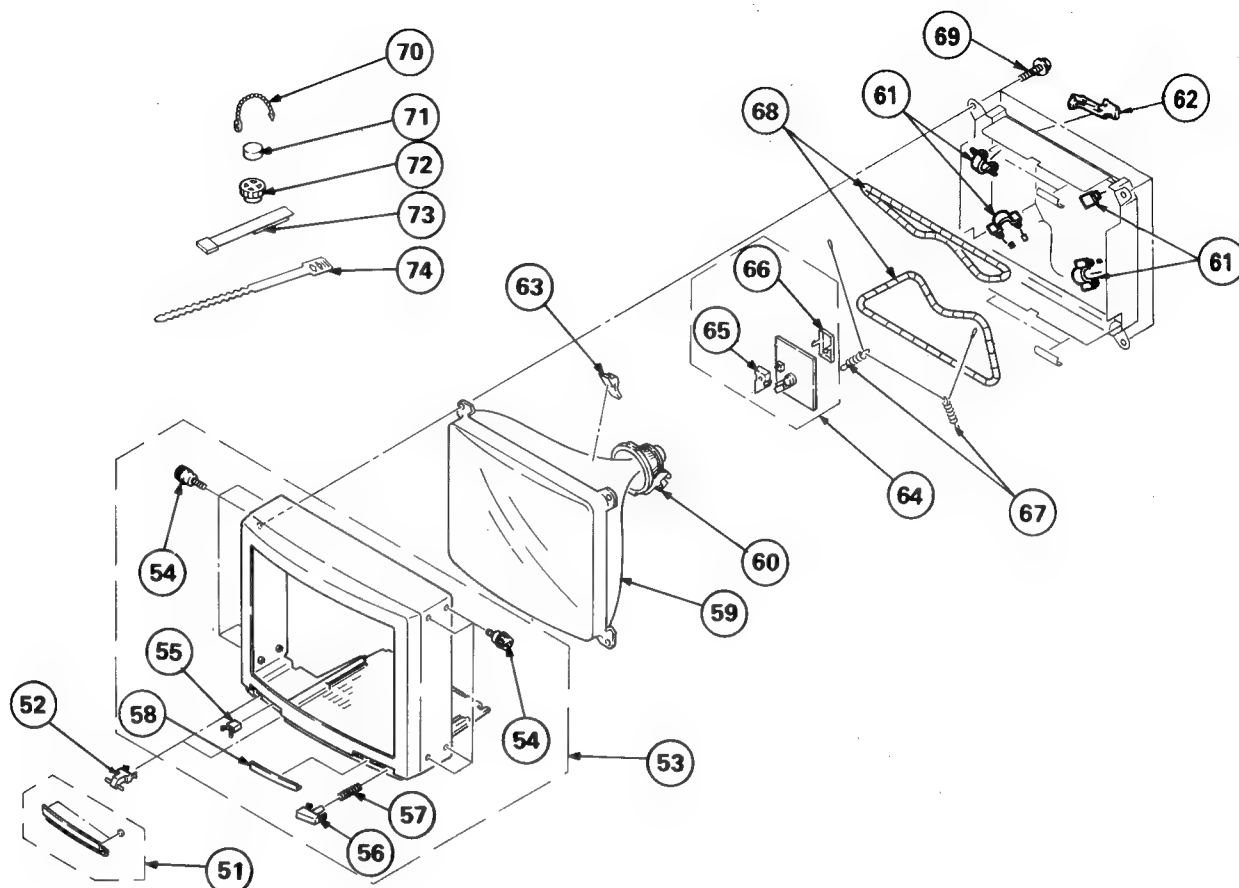


REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	*1-631-221-11	H2 BOARD		14	*A-1651-003-A	J1 BOARD, COMPLETE	
2	4-201-011-01	CAP, SWITCH		15	*4-386-624-11	BRACKET, J	
3	*1-631-223-11	F2 BOARD		16	*A-1347-031-A	V BOARD, COMPLETE	
4	▲1-571-433-11	SWITCH, PUSH (AC POWER)		17	*A-1621-001-A	B BOARD, COMPLETE	
5	*1-631-220-11	H1 BOARD		18	*4-386-629-12	BRACKET, A	
6	*1-631-222-11	J2 BOARD		19	*A-1632-001-A	A BOARD, COMPLETE	
7	*1-631-217-11	Y BOARD		20	▲1-465-301-11	TUNER, ET (UV-816 (PLL))	
8	*1-631-216-11	F1 BOARD		21	*4-386-617-01	HOLDER, TERMINAL	
9	*4-386-620-02	COVER, POWER		23	4-386-618-01	RIVET, T TYPE	
10	▲1-575-487-11	CORD, POWER (WITH NOISE FILTER)		24	4-201-017-01	COVER, REAR	
11	▲4-389-201-02	HOLDER, AC CORD		25	4-200-014-01	BRACKET, TERMINAL	
12	*A-1642-002-A	D BOARD, COMPLETE					
13	▲1-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)					

The components identified by shading and mark ▲ are critical for safety. Replace only with part number specified.

6-2. PICTURE TUBE

●: BVTP3 × 12 7-685-648-79



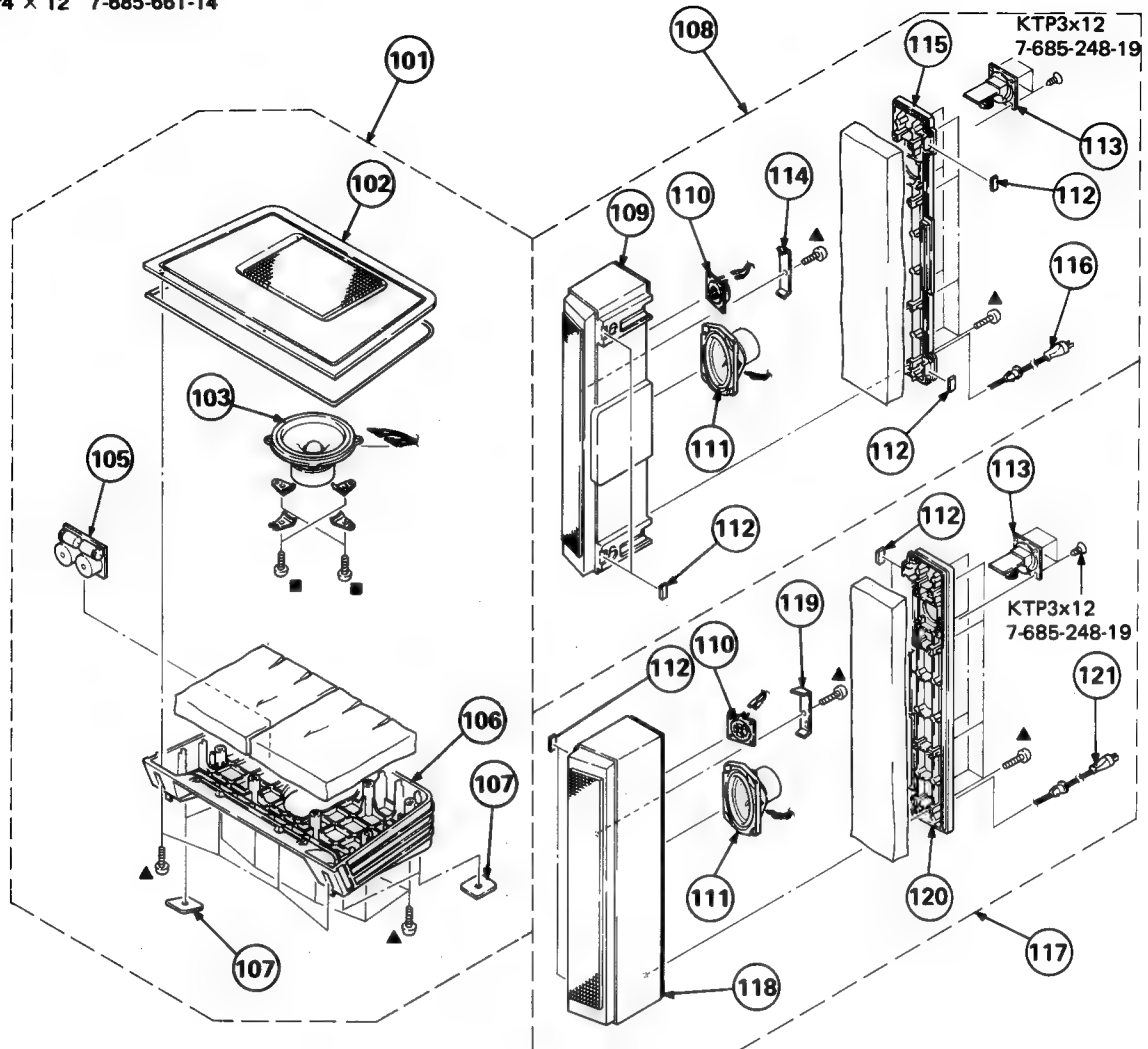
The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4201-006-2	DOOR ASSY, CONTROL		64	*A-1638-002-A	C BOARD, COMPLETE	65,66
52	3-703-035-11	SHAFT, LID		65	*4-379-167-01	COVER (MAIN), CV	
53	X-4201-005-1	CABINET ASSY (WITH BEZEL ASSY)	54-58	66	*4-379-160-01	COVER (REAR LID), CV	
54	X-4374-104-1	SCREW (B) ASSY, ORNAMENTAL		67	4-303-774-99	SPRING	
55	4-386-710-01	CATCHER, PUSH		68	A 1-426-372-11	COIL, DEMAGNETIZATION	
56	4-200-013-01	BUTTON, POWER		69	4-373-263-01	SCREW (M), PT	
57	4-329-112-21	SPRING		70	4-308-870-00	CLIP, LEAD WIRE	
58	4-200-017-12	WINDOW, ORNAMENTAL		71	1-452-032-00	MAGNET, DISK; 10MM φ	
59	A 8-733-224-05	PICTURE TUBE (A59JWC60X)		72	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ	
60	A 1-451-311-31	DEFLECTION YOKE (Y25FXA)		73	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
61	4-385-916-01	HOLDER (D)		74	3-701-007-00	BAND, BINDING	
62	4-387-216-01	HOLDER LEAD					
63	3-703-961-01	SPACER, DY					

6-3. SPEAKER(L, R, WOOFER)

▲: BVTP4 × 16 7-685-663-79

■: BVTP4 × 12 7-685-661-14



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	*A-1678-001-A	BOX ASSY, WOOFER		102-107	112	4-200-006-01	CUSHION, FOOT
102	X-4200-004-2	BOARD ASSY, BAFFLE		113	1-236-510-21	NETWORK, DIVIDING	
103	1-544-192-11	SPEAKER		114	*4-200-003-02	BRACKET (L), SPEAKER	
105	1-236-549-11	NETWORK, DIVIDING		115	4-201-007-01	PANEL (L), REAR	
106	4-200-027-01	BOX, WOOFER		116	1-575-025-11	CORD, SPEAKER (WITH PLUG)	
107	4-200-009-01	CUSHION, FOOT		117	*A-1678-010-A	BOX ASSY (RIGHT), SPEAKER	110-113, 118-121
108	*A-1678-012-A	BOX ASSY (LEFT), SPEAKER		118	X-4201-004-1	BOX ASSY (R), SIDE	
109	X-4201-003-1	BOX ASSY (L), SIDE	109-116	119	*4-200-004-02	BRACKET (R), SPEAKER	
110	1-544-203-11	SPEAKER		120	4-201-006-01	PANEL (R), REAR	
111	1-544-204-11	SPEAKER		121	1-575-024-11	CORD, SPEAKER (WITH PLUG)	

SECTION 7

ELECTRICAL PARTS LIST

V

NOTE:

The components identified by shading and mark Δ are critical for safety.

Replace only with part number specified.

• Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

• All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

• All resistors are in ohms
• F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

• MF : μ F, PF : μ F

COILS

• MMH : mH, UH : μ H

Note: In this parts list, the mounting diagram is for a different product.

Therefore, an excess of parts is listed.


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1347-031-A	V BOARD, COMPLETE *****					
	*4-380-698-01	CASE (MAIN), SHIELD, A1				<DIODE>	
	*4-380-699-01	CASE (UPPER LID), SHIELD, A1		D01	8-719-105-91	DIODE RD5.6M-B2	
	*4-382-701-01	CASE (BOTTOM LID), SHIELD, A2		D02	8-719-106-79	DIODE RD13M-B2	
				D03	8-719-400-18	DIODE MA152WK	
				D04	8-719-105-52	DIODE RD3.6M-B2	
				D07	8-719-106-17	DIODE RD6.8M-B2	
				D08	8-719-106-17	DIODE RD6.8M-B2	
				D09	8-719-400-18	DIODE MA152WK	
				D10	8-719-400-18	DIODE MA152WK	
				D11	8-719-914-44	DIODE DAP202K	
				D12	8-719-914-44	DIODE DAP202K	
						<IC>	
				IC1	8-759-986-92	IC SMAB8461P-W177	
				IC2	8-759-972-96	IC SAA5231-V6	
				IC3	8-759-032-98	IC SDA5243	
				IC4	8-759-230-68	IC TMN2063P-70	
						<COIL>	
				L01	1-408-411-00	INDUCTOR 15UH	
				L04	1-408-407-00	INDUCTOR 6.8UH	
				L05	1-408-407-00	INDUCTOR 6.8UH	
				L06	1-408-407-00	INDUCTOR 6.8UH	
						<IC LINK>	
				PS01 Δ	1-532-679-91	LINK, IC (ICP-N15)	
				PS02 Δ	1-532-727-91	LINK, IC	
						<TRANSISTOR>	
				Q3	8-729-900-53	TRANSISTOR DTC114EK	
				Q01	8-729-808-76	TRANSISTOR 2SD1913SA	
				Q02	8-729-807-50	TRANSISTOR 2SD1623-R	
				Q04	8-729-271-22	TRANSISTOR 2SC2712-G	
				Q05	8-729-807-50	TRANSISTOR 2SD1623-R	
				Q06	8-729-271-22	TRANSISTOR 2SC2712-G	
				Q07	8-729-900-98	TRANSISTOR DTC143TK	
				Q09	8-729-807-87	TRANSISTOR 2SB1295-UL6	
				Q10	8-729-807-87	TRANSISTOR 2SB1295-UL6	
				Q11	8-729-807-87	TRANSISTOR 2SB1295-UL6	
						<RESISTOR>	
				JW1	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JW2	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JW3	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JW4	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				JW5	1-216-295-00	METAL GLAZE 0 5% 1/10W	
						<CONNECTOR>	
	CN01	*1-565-393-11	CONNECTOR, BOARD TO BOARD				
	CN02	*1-565-393-11	CONNECTOR, BOARD TO BOARD				
	CN03	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P				
						<TRIMMER>	
	CT01	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)				



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
JW6	1-216-295-00	METAL GLAZE	0 5% 1/10W	R63	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
JW7	1-216-295-00	METAL GLAZE	0 5% 1/10W	R64	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
JW8	1-216-295-00	METAL GLAZE	0 5% 1/10W	R65	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
JW9	1-216-295-00	METAL GLAZE	0 5% 1/10W	R66	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JW10	1-216-295-00	METAL GLAZE	0 5% 1/10W	R67	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JW11	1-216-295-00	METAL GLAZE	0 5% 1/10W	R68	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JW12	1-216-295-00	METAL GLAZE	0 5% 1/10W	R69	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JW13	1-216-295-00	METAL GLAZE	0 5% 1/10W			<VARIABLE RESISTOR>	
JW14	1-216-295-00	METAL GLAZE	0 5% 1/10W	RV01	1-238-012-11	RES, ADJ, CARBON 1K	
JW15	1-216-295-00	METAL GLAZE	0 5% 1/10W			<CRYSTAL>	
JW16	1-216-295-00	METAL GLAZE	0 5% 1/10W	X01	1-567-162-21	OSCILLATOR, CRYSTAL	
JW17	1-216-295-00	METAL GLAZE	0 5% 1/10W	X02	1-567-495-21	OSCILLATOR, CRYSTAL	
JW18	1-216-295-00	METAL GLAZE	0 5% 1/10W	X03	1-577-082-11	VIBRATOR, CERAMIC	
JW19	1-216-295-00	METAL GLAZE	0 5% 1/10W			*****	
JW20	1-216-295-00	METAL GLAZE	0 5% 1/10W			*A-1621-001-A B BOARD, COMPLETE	
JW21	1-216-295-00	METAL GLAZE	0 5% 1/10W			*****	
JW22	1-216-295-00	METAL GLAZE	0 5% 1/10W			*1-565-393-11 CONNECTOR, BOARD TO BOARD	
JW23	1-216-295-00	METAL GLAZE	0 5% 1/10W			*1-568-878-51 PIN, CONNECTOR 3P	
JW24	1-216-295-00	METAL GLAZE	0 5% 1/10W			*1-568-881-51 PIN, CONNECTOR 6P	
JW25	1-216-295-00	METAL GLAZE	0 5% 1/10W			*1-568-881-61 PIN, CONNECTOR 6P	
R01	1-218-326-11	METAL GLAZE	470 5% 1/2W			<CAPACITOR>	
R02	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C301	1-106-228-00	MYLAR 0.22MF 10% 100V	
R04	1-218-326-11	METAL GLAZE	470 5% 1/2W	C302	1-106-228-00	MYLAR 0.22MF 10% 100V	
R05	1-216-025-00	METAL GLAZE	100 5% 1/10W	C303	1-124-122-11	ELECT 100MF 20% 50V	
R06	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C304	1-106-228-00	MYLAR 0.22MF 10% 100V	
R07	1-216-025-00	METAL GLAZE	100 5% 1/10W	C305	1-124-119-00	ELECT 330MF 20% 16V	
R08	1-216-037-00	METAL GLAZE	330 5% 1/10W	C306	1-124-902-00	ELECT 0.47MF 20% 50V	
R09	1-216-091-00	METAL GLAZE	56K 5% 1/10W	C307	1-124-902-00	ELECT 0.47MF 20% 50V	
R13	1-216-025-00	METAL GLAZE	100 5% 1/10W	C308	1-124-902-00	ELECT 0.47MF 20% 50V	
R14	1-216-025-00	METAL GLAZE	100 5% 1/10W	C309	1-124-902-00	ELECT 0.47MF 20% 50V	
R15	1-216-121-00	METAL GLAZE	1M 5% 1/10W	C310	1-106-220-00	MYLAR 0.1MF 10% 100V	
R16	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	C311	1-106-220-00	MYLAR 0.1MF 10% 100V	
R17	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C312	1-124-902-00	ELECT 0.47MF 20% 50V	
R18	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C313	1-124-902-00	ELECT 0.47MF 20% 50V	
R19	1-216-037-00	METAL GLAZE	330 5% 1/10W	C314	1-124-902-00	ELECT 0.47MF 20% 50V	
R20	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	C315	1-124-791-11	ELECT 1MF 20% 50V	
R27	1-216-013-00	METAL GLAZE	33 5% 1/10W	C316	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
R28	1-216-013-00	METAL GLAZE	33 5% 1/10W	C317	1-124-910-11	ELECT 47MF 20% 50V	
R29	1-216-013-00	METAL GLAZE	33 5% 1/10W	C318	1-163-038-00	CERAMIC CHIP 0.1MF 25V	
R30	1-218-325-11	METAL GLAZE	120 5% 1/4W	C320	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
R31	1-218-325-11	METAL GLAZE	120 5% 1/4W	C322	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
R32	1-218-325-11	METAL GLAZE	120 5% 1/4W	C323	1-102-947-00	CERAMIC 10PF 0.5PF 50V	
R33	1-216-023-00	METAL GLAZE	82 5% 1/10W	C327	1-164-232-11	CERAMIC CHIP 0.01MF 50V	
R34	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C330	1-163-113-00	CERAMIC CHIP 68PF 5% 50V	
R37	1-216-025-00	METAL GLAZE	100 5% 1/10W	C331	1-163-077-00	CERAMIC CHIP 0.1MF 50V	
R38	1-216-047-00	METAL GLAZE	820 5% 1/10W	C332	1-126-103-11	ELECT 470MF 20% 16V	
R40	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C333	1-106-375-12	MYLAR 0.022MF 10% 250V	
R41	1-216-041-00	METAL GLAZE	470 5% 1/10W	C334	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
R43	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C335	1-163-097-00	CERAMIC CHIP 15PF 5% 50V	
R44	1-216-041-00	METAL GLAZE	470 5% 1/10W	C336	1-102-816-00	CERAMIC 120PF 5% 50V	
R45	1-216-049-00	METAL GLAZE	1K 5% 1/10W	C337	1-164-232-11	CERAMIC CHIP 0.01MF 50V	
R46	1-216-311-00	METAL GLAZE	6.8 5% 1/10W	C338	1-106-220-00	MYLAR 0.1MF 10% 100V	
R51	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C339	1-106-220-00	MYLAR 0.1MF 10% 100V	
R52	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C341	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
R53	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C343	1-106-383-00	MYLAR 0.047MF 10% 100V	
R54	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	C344	1-130-783-00	MYLAR 0.33MF 10% 100V	
R55	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R56	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R57	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R58	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R59	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W				
R60	1-216-076-00	METAL GLAZE	13K 5% 1/10W				
R61	1-216-083-00	METAL GLAZE	27K 5% 1/10W				
R62	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				

B

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C345	1-163-123-00	CERAMIC CHIP 180PF	5%	50V	<DELAY LINE>		
C346	1-163-033-00	CERAMIC CHIP 0.022MF		50V	DL332	1-236-062-11	MODULE, Y DELAY LINE
C347	1-124-791-11	ELECT 1MF	20%	50V	DL401	1-415-613-11	DELAY LINE, Y
C348	1-124-791-11	ELECT 1MF	20%	50V	<IC>		
C349	1-164-232-11	CERAMIC CHIP 0.01MF		50V	IC301	8-759-979-85	IC TDA4580-V4
C350	1-164-232-11	CERAMIC CHIP 0.01MF		50V	IC302	8-759-980-60	IC TDA8442-N3
C351	1-106-375-12	MYLAR 0.022MF	10%	250V	IC303	8-759-240-53	IC TC4053BP
C352	1-106-375-12	MYLAR 0.022MF	10%	250V	IC331	8-759-990-29	IC TDA4650
C353	1-106-375-12	MYLAR 0.022MF		250V	IC332	8-759-990-30	IC TDA4660
C354	1-124-910-11	ELECT 47MF	20%	50V	IC1301	1-235-534-21	CONTROL MODULE, PICTURE
C357	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	<COIL>		
C358	1-124-917-11	ELECT 33MF	20%	50V	L301	1-410-868-21	INDUCTOR 4.7UH
C359	1-163-103-00	CERAMIC CHIP 27PF	5%	50V	L302	1-410-868-21	INDUCTOR 4.7UH
C360	1-164-232-11	CERAMIC CHIP 0.01MF		50V	L331	1-404-554-11	COIL
C364	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	L336	1-404-554-11	COIL
C365	1-124-910-11	ELECT 47MF	20%	50V	L338	1-408-409-00	INDUCTOR 10UH
C366	1-126-103-11	ELECT 470MF	20%	16V	L1301	1-408-425-00	INDUCTOR 220UH
C367	1-164-232-11	CERAMIC CHIP 0.01MF		50V	L1302	1-408-419-00	INDUCTOR 68UH
C381	1-124-902-00	ELECT 0.47MF	20%	50V	<TRANSISTOR>		
C382	1-124-927-11	ELECT 4.7MF	20%	50V	Q303	8-729-271-22	TRANSISTOR 2SC2712-G
C384	1-124-910-11	ELECT 47MF	20%	50V	Q305	8-729-901-00	TRANSISTOR DTC124EK
C385	1-124-927-11	ELECT 4.7MF	20%	50V	Q306	8-729-271-22	TRANSISTOR 2SC2712-G
C386	1-124-927-11	ELECT 4.7MF	20%	50V	Q311	8-729-271-22	TRANSISTOR 2SC2712-G
C387	1-124-791-11	ELECT 1MF	20%	50V	Q312	8-729-271-22	TRANSISTOR 2SC2712-G
C388	1-106-220-00	MYLAR 0.1MF	10%	100V	Q313	8-729-271-22	TRANSISTOR 2SC2712-G
C401	1-101-361-00	CERAMIC 150PF	5%	50V	Q316	8-729-271-22	TRANSISTOR 2SC2712-G
C402	1-163-197-00	CERAMIC CHIP 470PF	5%	50V	Q330	8-729-216-22	TRANSISTOR 2SA1162
C403	1-164-232-11	CERAMIC CHIP 0.01MF		50V	Q331	8-729-901-00	TRANSISTOR DTC124EK
C1311	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	Q332	8-729-216-22	TRANSISTOR 2SA1162
C1312	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	Q333	8-729-216-22	TRANSISTOR 2SA1162
C1313	1-102-953-00	CERAMIC 18PF	5%	50V	Q334	8-729-271-22	TRANSISTOR 2SC2712-G
<TRIMMER>				Q335	8-729-271-22	TRANSISTOR 2SC2712-G	
CT331	1-141-181-11	CAP, TRIMMER		Q336	8-729-900-36	TRANSISTOR DTC124ES	
CT332	1-141-181-11	CAP, TRIMMER		Q381	8-729-901-00	TRANSISTOR DTC124EK	
<DIODE>				Q382	8-729-271-22	TRANSISTOR 2SC2712-G	
D301	8-719-911-19	DIODE 1SS119		Q1301	8-729-901-00	TRANSISTOR DTC124EK	
D302	8-719-911-19	DIODE 1SS119		Q1305	8-729-271-22	TRANSISTOR 2SC2712-G	
D303	8-719-911-19	DIODE 1SS119		Q1306	8-729-271-22	TRANSISTOR 2SC2712-G	
D304	8-719-911-19	DIODE 1SS119		<RESISTOR>			
D305	8-719-911-19	DIODE 1SS119		R301	1-216-033-00	METAL GLAZE 220 5%	1/10W
D307	8-719-110-23	DIODE RD11ES-B3		R302	1-216-033-00	METAL GLAZE 220 5%	1/10W
D308	8-719-911-19	DIODE 1SS119		R303	1-216-033-00	METAL GLAZE 220 5%	1/10W
D309	8-719-911-19	DIODE 1SS119		R304	1-216-033-00	METAL GLAZE 220 5%	1/10W
D310	8-719-110-23	DIODE RD11ES-B3		R305	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
D311	8-719-110-23	DIODE RD11ES-B3		R307	1-216-097-00	METAL GLAZE 100K 5%	1/10W
D312	8-719-110-23	DIODE RD11ES-B3		R308	1-216-184-00	METAL GLAZE 270 5%	1/8W
D313	8-719-911-19	DIODE 1SS119		R309	1-216-025-00	METAL GLAZE 100 5%	1/10W
D314	8-719-911-19	DIODE 1SS119		R310	1-216-025-00	METAL GLAZE 100 5%	1/10W
D315	8-719-911-19	DIODE 1SS119		R311	1-216-025-00	METAL GLAZE 100 5%	1/10W
D316	8-719-911-19	DIODE 1SS119		R312	1-216-033-00	METAL GLAZE 220 5%	1/10W
D317	8-719-911-19	DIODE 1SS119		R313	1-216-081-00	METAL GLAZE 22K 5%	1/10W
D318	8-719-911-19	DIODE 1SS119		R314	1-216-182-00	METAL GLAZE 220 5%	1/8W
D319	8-719-911-19	DIODE 1SS119		R315	1-216-031-00	METAL GLAZE 180 5%	1/10W
D320	8-719-911-19	DIODE 1SS119		R316	1-216-031-00	METAL GLAZE 180 5%	1/10W
D331	8-719-911-19	DIODE 1SS119		R317	1-216-031-00	METAL GLAZE 180 5%	1/10W
D332	8-719-911-19	DIODE 1SS119		R318	1-216-073-00	METAL GLAZE 10K 5%	1/10W
D333	8-719-911-19	DIODE 1SS119		R319	1-216-033-00	METAL GLAZE 220 5%	1/10W
D350	8-719-109-90	DIODE RD5.6ES-B3					

The components identified by shading and mark  are critical for safety.
Replace only with part number specified.

B

F1

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R320	1-216-198-00	METAL GLAZE 1K 5%	1/8W	R407	1-216-047-00	METAL GLAZE 820 5%	1/10W
R321	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W	R410	1-216-184-00	METAL GLAZE 270 5%	1/8W
R322	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	R412	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R323	1-249-422-11	CARBON 2.7K 5%	1/4W	R1301	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R324	1-249-429-11	CARBON 10K 5%	1/4W	R1302	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R325	1-249-429-11	CARBON 10K 5%	1/4W	R1303	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R328	1-216-009-00	METAL GLAZE 22 5%	1/10W	R1304	1-216-097-00	METAL GLAZE 100K 5%	1/10W
R329	1-216-009-00	METAL GLAZE 22 5%	1/10W			<VARIABLE RESISTOR>	
R330	1-216-009-00	METAL GLAZE 22 5%	1/10W	RV331	1-238-012-11	RES, ADJ, CARBON 1K	
R331	1-216-001-00	METAL GLAZE 10 5%	1/10W			<CRYSTAL>	
R332	1-216-184-00	METAL GLAZE 270 5%	1/8W	X331	1-567-307-11	OSCILLATOR, CRYSTAL	
R333	1-216-121-00	METAL GLAZE 1M 5%	1/10W	X332	1-567-131-00	OSCILLATOR, CRYSTAL	
R334	1-216-073-00	METAL GLAZE 10K 5%	1/10W			*****	
R335	1-216-073-00	METAL GLAZE 10K 5%	1/10W	*1-631-216-11	F1 BOARD		
R336	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W		*****		
R337	1-216-184-00	METAL GLAZE 270 5%	1/8W	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		
R338	1-216-001-00	METAL GLAZE 10 5%	1/10W	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		
R339	1-216-033-00	METAL GLAZE 220 5%	1/10W	*1-565-395-11	PIN, CONNECTOR 3P		
R340	1-247-903-00	CARBON 1M 5%	1/4W	*1-566-664-11	PIN, CONNECTOR 4P		
R341	1-216-031-00	METAL GLAZE 180 5%	1/10W	*1-568-106-11	PIN, CONNECTOR 4P		
R342	1-216-041-00	METAL GLAZE 470 5%	1/10W	*1-568-878-51	PIN, CONNECTOR 3P		
R344	1-216-089-00	METAL GLAZE 47K 5%	1/10W		<CAPACITOR>		
R346	1-216-202-00	METAL GLAZE 1.5K 5%	1/8W	C1601A	1-136-518-11	FILM 0.33MF 20% 300V	
R347	1-216-073-00	METAL GLAZE 10K 5%	1/10W	C1602A	1-136-519-11	FILM 0.47MF 20% 300V	
R348	1-216-089-00	METAL GLAZE 47K 5%	1/10W	C1603A	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
R354	1-216-033-00	METAL GLAZE 220 5%	1/10W	C1604A	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
R355	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W	C1605A	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
R356	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W	C1606A	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
R357	1-216-033-00	METAL GLAZE 220 5%	1/10W	C1607A	1-161-964-61	CERAMIC 0.0047MF 250V	
R358	1-216-033-00	METAL GLAZE 220 5%	1/10W		<FUSE>		
R359	1-216-089-00	METAL GLAZE 47K 5%	1/10W	F1601A	1-532-350-11	FUSE, TIME-LAG 4A/250V	
R360	1-216-089-00	METAL GLAZE 47K 5%	1/10W		1-533-087-00	HOLDER, FUSE; F1601	
R361	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		<TRANSFORMER>		
R362	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W	LF1601A	1-421-866-12	LFT	
R363	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W	LF1602A	1-421-776-11	LFT	
R364	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	LF1603A	1-421-592-21	TRANSFORMER, FERRITE	
R365	1-216-047-00	METAL GLAZE 820 5%	1/10W		<RESISTOR>		
R366	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W	R1601A	1-246-513-75	CARBON 47K 5%	1/4W
R367	1-216-033-00	METAL GLAZE 220 5%	1/10W	R1602A	1-244-945-91	CARBON 1M 5%	1/2W
R370	1-216-033-00	METAL GLAZE 220 5%	1/10W	R1603A	1-217-328-11	WIREWOUND 2.7 10%	7W F
R372	1-216-023-00	METAL GLAZE 82 5%	1/10W	R1604A	1-246-513-75	CARBON 47K 5%	1/4W
R376	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R1605A	1-218-265-91	METAL GLAZE 8.2W 5%	1W
R378	1-216-097-00	METAL GLAZE 100K 5%	1/10W		<THERMISTOR>		
R379	1-216-097-00	METAL GLAZE 100K 5%	1/10W	THP601A	1-808-059-31	THERMISTOR, POSITIVE	
R380	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W		*****		
R381	1-216-093-00	METAL GLAZE 68K 5%	1/10W				
R382	1-216-103-00	METAL GLAZE 180K 5%	1/10W				
R383	1-216-115-00	METAL GLAZE 560K 5%	1/10W				
R385	1-216-085-00	METAL GLAZE 33K 5%	1/10W				
R386	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W				
R387	1-216-049-00	METAL GLAZE 1K 5%	1/10W				
R388	1-216-049-00	METAL GLAZE 1K 5%	1/10W				
R389	1-216-101-00	METAL GLAZE 150K 5%	1/10W				
R391	1-216-023-00	METAL GLAZE 82 5%	1/10W				
R392	1-216-019-00	METAL GLAZE 56 5%	1/10W				
R393	1-216-019-00	METAL GLAZE 56 5%	1/10W				
R394	1-216-019-00	METAL GLAZE 56 5%	1/10W				
R398	1-216-081-00	METAL GLAZE 22K 5%	1/10W				
R401	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W				
R402	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W				
R403	1-216-025-00	METAL GLAZE 100 5%	1/10W				
R404	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W				
R405	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W				
R406	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W				

F2

A

C

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*1-631-223-11	F2 BOARD	*****		R111	1-249-423-11	CARBON	3.3K 5% 1/4W
*1-566-664-11	PIN, CONNECTOR 4P			R116	1-249-407-11	CARBON	150 5% 1/4W
				R118	1-249-435-11	CARBON	33K 5% 1/4W
				R128	1-249-406-11	CARBON	120 5% 1/4W
				R129	1-249-421-11	CARBON	2.2K 5% 1/4W
	<SWITCH>			R130	1-249-421-11	CARBON	2.2K 5% 1/4W
S1701A	1-571-433-11	SWITCH, PUSH (AC POWER)		R157	1-249-417-11	CARBON	1K 5% 1/4W
	*****			R158	1-249-409-11	CARBON	220 5% 1/4W
				R159	1-249-409-11	CARBON	220 5% 1/4W
				R161	1-249-437-11	CARBON	47K 5% 1/4W
*A-1632-001-A	A BOARD, COMPLETE	*****		R162	1-249-440-11	CARBON	82K 5% 1/4W
				R163	1-249-440-11	CARBON	82K 5% 1/4W
*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)			R164	1-249-430-11	CARBON	12K 5% 1/4W
*1-564-881-11	PLUG, CONNECTOR 4P			R165	1-249-430-11	CARBON	12K 5% 1/4W
*1-564-886-11	PLUG, CONNECTOR 9P			R167	1-249-422-11	CARBON	2.7K 5% 1/4W
*1-565-503-11	CONNECTOR, BOARD TO BOARD 12P			R168	1-249-437-11	CARBON	47K 5% 1/4W
*1-566-659-11	CONNECTOR, HINGE (SOCKET) 18P			R169	1-249-422-11	CARBON	2.7K 5% 1/4W
				R181	1-249-417-11	CARBON	1K 5% 1/4W
				R182	1-249-425-11	CARBON	4.7K 5% 1/4W
				R193	1-249-429-11	CARBON	10K 5% 1/4W
	<CAPACITOR>			R194	1-249-401-11	CARBON	47 5% 1/4W
C101	1-126-233-11	ELECT	22MF	20%	50V		
C102	1-126-103-11	ELECT	470MF	20%	16V		
C104	1-124-910-11	ELECT	47MF	20%	50V		
C106	1-126-233-11	ELECT	22MF	20%	50V		
C108	1-136-165-00	FILM	0.1MF	5%	50V		
						<IF BLOCK>	
C109	1-102-824-00	CERAMIC	470PF	5%	50V	SIF102	1-464-964-11 IF BLOCK (IFG-5.5S)
C111	1-124-925-11	ELECT	2.2MF	20%	50V	VIF101	1-466-154-12 IF BLOCK (IFG-389S)
C115	1-124-925-11	ELECT	2.2MF	20%	50V		
C127	1-124-122-11	ELECT	100MF	20%	50V		
C128	1-124-910-11	ELECT	47MF	20%	50V		
						<TUNER>	
C129	1-124-910-11	ELECT	47MF	20%	50V	TU101A	1-465-301-11 TUNER, ET (UV-816(PLL))
C138	1-136-165-00	FILM	0.1MF	5%	50V		*****
C171	1-102-114-00	CERAMIC	470PF	10%	50V		
C172	1-102-114-00	CERAMIC	470PF	10%	50V		
C177	1-102-074-00	CERAMIC	0.001MF	10%	50V		
C181	1-101-004-00	CERAMIC	0.01MF		50V		
	<IC>						
IC103	8-759-979-62	IC PCF8574					
	<COIL>						
L100	1-410-116-11	INDUCTOR	0.56MMH				
L101	1-408-225-00	INDUCTOR	3.3UH				
L102	1-408-413-00	INDUCTOR	22UH				
L107	1-408-397-00	INDUCTOR	1UH				
	<TRANSISTOR>						
Q113	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q114	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q115	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q116	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q125	8-729-900-89	TRANSISTOR DTC144ES					
Q126	8-729-900-65	TRANSISTOR DTA144ES					
Q181	8-729-119-78	TRANSISTOR 2SC2785-HFE					
	<RESISTOR>						
R101	1-249-405-11	CARBON	100	5%	1/4W		
R105	1-249-432-11	CARBON	18K	5%	1/4W		
R107	1-249-433-11	CARBON	22K	5%	1/4W		
R108	1-249-432-11	CARBON	18K	5%	1/4W		
R110	1-249-429-11	CARBON	10K	5%	1/4W		
		</					

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

C **D**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<DIODE>				R733	1-249-415-11	CARBON 680 5% 1/4W	
D701	8-719-110-14	DIODE RD9.1ES-B3		R734	1-249-405-11	CARBON 100 5% 1/4W	
D702	8-719-911-19	DIODE 1SS119		R735	1-215-493-00	METAL 1M 1% 1/6W	
D703	8-719-911-19	DIODE 1SS119		R736	1-216-486-00	METAL OXIDE 8.2K 5% 3W	F
D704	8-719-911-19	DIODE 1SS119		R737	1-215-491-00	METAL 820K 1% 1/6W	
D705	8-719-911-19	DIODE 1SS119		R739	1-249-417-11	CARBON 1K 5% 1/4W	
D706	8-719-911-19	DIODE 1SS119		<VARIABLE RESISTOR>			
D707	8-719-911-19	DIODE 1SS119		RV701	1-230-641-11	RES. ADJ. METAL GLAZE 2.2M	
D708	8-719-911-19	DIODE 1SS119		RV702	1-230-619-11	RES. ADJ. METAL GLAZE 110M	
D709	8-719-911-19	DIODE 1SS119		RV703	1-237-749-11	RES. ADJ. CARBON 2200	
D710	8-719-911-19	DIODE 1SS119		RV704	1-237-749-11	RES. ADJ. CARBON 2200	
D711	8-719-300-33	DIODE RU-3AM		*****			
D713	8-719-911-19	DIODE 1SS119		*A-1642-002 A	D BOARD, COMPLETE		
<JACK>				*****			
J701	1-526-798-51	SOCKET, PICTURE TUBE		*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P		
<COIL>				*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		
L704	1-410-878-21	INDUCTOR 33UH		*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)		
<TRANSISTOR>				*1-564-038-00	CONNECTOR PLUG, DY (MINI) 6P		
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE		*1-564-505-11	PLUG, CONNECTOR 2P		
Q703	8-729-326-11	TRANSISTOR 2SC2611		*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR		
Q704	8-729-200-17	TRANSISTOR 2SA1091		*1-565-395-11	PIN, CONNECTOR 3P		
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE		*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)		
Q706	8-729-326-11	TRANSISTOR 2SC2611		*1-566-660-11	CONNECTOR, HINGE (PLUG) 18P		
Q707	8-729-200-17	TRANSISTOR 2SA1091		*1-568-878-51	PIN, CONNECTOR 3P		
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE		*1-568-879-61	PIN, CONNECTOR 4P		
Q709	8-729-326-11	TRANSISTOR 2SC2611		*1-568-881-51	PIN, CONNECTOR 6P		
Q710	8-729-200-17	TRANSISTOR 2SA1091		*1-568-881-61	PIN, CONNECTOR 6P		
<RESISTOR>				*1-568-882-51	PIN, CONNECTOR 7P		
R704	1-216-486-00	METAL OXIDE 8.2K 5% 3W	F	*1-568-882-71	PIN, CONNECTOR 7P		
R705	1-202-824-00	SOLID 3.3K 10% 1/2W		4-200-001-01	HOLDER, IC		
R706	1-249-409-11	CARBON 220 5% 1/4W		*4-341-751-01	EYELET		
R707	1-249-412-11	CARBON 390 5% 1/4W		*4-341-752-01	EYELET		
R708	1-249-401-11	CARBON 47 5% 1/4W		*4-368-683-01	SPRING		
R709	1-202-844-00	SOLID 330K 10% 1/2W		<CAPACITOR>			
R710	1-215-465-00	METAL 68K 1% 1/6W		C002	1-102-074-00	CERAMIC 0.001MF 10% 50V	
R712	1-249-417-11	CARBON 1K 5% 1/4W		C003	1-123-875-11	ELECT 10MF 20% 50V	
R713	1-215-471-00	METAL 120K 1% 1/6W		C004	1-124-120-11	ELECT 220MF 20% 16V	
R714	1-216-486-00	METAL OXIDE 8.2K 5% 3W	F	C005	1-124-791-11	ELECT 1MF 20% 50V	
R715	1-202-824-00	SOLID 3.3K 10% 1/2W		C006	1-102-978-00	CERAMIC 220PF 5% 50V	
R716	1-249-409-11	CARBON 220 5% 1/4W		C007	1-102-978-00	CERAMIC 220PF 5% 50V	
R717	1-249-415-11	CARBON 680 5% 1/4W		C008	1-101-880-00	CERAMIC 47PF 5% 50V	
R718	1-202-814-11	SOLID 33K 10% 1/2W		C009	1-101-880-00	CERAMIC 47PF 5% 50V	
R719	1-249-401-11	CARBON 47 5% 1/4W		C010	1-124-120-11	ELECT 220MF 20% 16V	
R720	1-249-423-11	CARBON 3.3K 5% 1/4W		C011	1-101-004-00	CERAMIC 0.01MF 50V	
R721	1-202-842-11	SOLID 220K 10% 1/2W		C012	1-123-875-11	ELECT 10MF 20% 50V	
R722	1-202-848-00	SOLID 680K 10% 1/2W		C013	1-106-220-00	MYLAR 0.1MF 10% 100V	
R723	1-249-417-11	CARBON 1K 5% 1/4W		C014	1-106-220-00	MYLAR 0.1MF 10% 100V	
R724	1-202-846-00	SOLID 470K 10% 1/2W		C015	1-124-902-00	ELECT 0.47MF 20% 50V	
R725	1-202-838-00	SOLID 100K 10% 1/2W		C016	1-101-361-00	CERAMIC 150PF 5% 50V	
R726	1-202-824-00	SOLID 3.3K 10% 1/2W		C017	1-106-220-00	MYLAR 0.1MF 10% 100V	
R727	1-249-409-11	CARBON 220 5% 1/4W		C018	1-102-980-00	CERAMIC 270PF 5% 50V	
R728	1-216-347-11	METAL OXIDE 0.68 5% 1W	F	C019	1-106-383-00	MYLAR 0.047MF 10% 100V	
R729	1-249-416-11	CARBON 820 5% 1/4W		C020	1-124-917-11	ELECT 33MF 20% 50V	
R730	1-249-401-11	CARBON 47 5% 1/4W		C021	1-102-973-00	CERAMIC 100PF 5% 50V	
R731	1-249-423-11	CARBON 3.3K 5% 1/4W		C022	1-101-004-00	CERAMIC 0.01MF 50V	
R732	1-249-415-11	CARBON 680 5% 1/4W		C023	1-102-973-00	CERAMIC 100PF 5% 50V	
				C024	1-102-973-00	CERAMIC 100PF 5% 50V	
				C025	1-102-973-00	CERAMIC 100PF 5% 50V	
				C027	1-124-910-11	ELECT 47MF 20% 50V	

D

— 57 —

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

D

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D603	8-719-911-55	DIODE U05G		L810 Δ	1-421-982-12	PWC	
D604	8-719-911-55	DIODE U05G				<IC LINK>	
D605	8-719-911-55	DIODE U05G		PS601 Δ	1-532-984-91	LINK, IC (ICP-N50) 2A	
D606	8-719-300-33	DIODE RU-3AM		PS602 Δ	1-532-984-91	LINK, IC (ICP-N50) 2A	
D607	8-719-300-33	DIODE RU-3AM				<TRANSISTOR>	
D608	8-719-300-33	DIODE RU-3AM		Q001	8-729-900-89	TRANSISTOR DTC144ES	
D609	8-719-110-76	DIODE RD33ES-B1		Q002	8-729-900-65	TRANSISTOR DTA144ES	
D610	8-719-300-59	DIODE CTU-12S		Q003	8-729-173-38	TRANSISTOR 2SA733-K	
D611	8-719-900-26	DIODE ERD29-08J		Q004	8-729-173-38	TRANSISTOR 2SA733-K	
D612	8-719-300-59	DIODE CTU-12S		Q005	8-729-900-89	TRANSISTOR DTC144ES	
D613	8-719-300-33	DIODE RU-3AM		Q006	8-729-900-89	TRANSISTOR DTC144ES	
D614	8-719-300-33	DIODE RU-3AM		Q007	8-729-900-89	TRANSISTOR DTC144ES	
D616	8-719-109-93	DIODE RD6.2ES-B2		Q008	8-729-900-89	TRANSISTOR DTC144ES	
D617	8-719-911-19	DIODE 1SS119		Q009	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D618	8-719-109-89	DIODE RD5.6ES-B2		Q251	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D619	8-719-110-76	DIODE RD33ES-B1		Q261	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D620	8-719-016-42	DIODE MC932		Q271	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D621	8-719-110-76	DIODE RD33ES-B1		Q502	8-729-173-38	TRANSISTOR 2SA733-K	
D622	8-719-911-19	DIODE 1SS119		Q505	8-729-140-96	TRANSISTOR 2SD774-34	
D623	8-719-911-19	DIODE 1SS119		Q506	8-729-140-97	TRANSISTOR 2SB734-34	
D624	8-719-911-19	DIODE 1SS119		Q507	8-729-173-38	TRANSISTOR 2SA733-K	
D630	8-719-110-39	DIODE RD15ES-B1		Q598	8-729-173-38	TRANSISTOR 2SA733-K	
D801	8-719-300-33	DIODE RU-3AM		Q601	8-729-111-67	TRANSISTOR 2SB1094-L	
D802	8-719-300-33	DIODE RU-3AM		Q602	8-729-209-02	TRANSISTOR 2SD1548-LB	
D803	8-719-300-65	DIODE ES1F		Q603	8-729-111-67	TRANSISTOR 2SB1094-L	
D804	8-719-911-55	DIODE U05G		Q604	8-729-173-38	TRANSISTOR 2SA733-K	
D805	8-719-911-55	DIODE U05G		Q605	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D806	8-719-945-80	DIODE ERC06-15S		Q606	8-729-119-78	TRANSISTOR 2SC2785-HFE	
D807	8-719-945-80	DIODE ERC06-15S		Q607	8-729-920-92	TRANSISTOR 2SD2096-EF	
D808	8-719-900-26	DIODE ERD29-08J		Q608	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<IC>		Q609	8-729-320-62	TRANSISTOR 2SD789-34	
IC001	8-759-035-37	IC SDA2083-A006		Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE	
IC002	8-752-332-82	IC CXD1050A-09P		Q804	8-729-304-50	TRANSISTOR 2SD1941-06	
IC003	8-759-945-58	IC RC4558P		Q805	8-729-119-80	TRANSISTOR 2SC2688-LK	
IC005	8-759-748-56	IC SDA2546				<RESISTOR>	
IC251	8-759-988-94	IC TDA2050		R001	1-249-413-11	CARBON 470 5% 1/4W	
	4-201-023-01	SPACER, INSULATING; IC251		R002	1-249-413-11	CARBON 470 5% 1/4W	
	4-812-134-00	RIVET NYLON, 3.5; IC251		R003	1-249-417-11	CARBON 1K 5% 1/4W	
IC261	8-759-988-94	IC TDA2050		R004	1-249-417-11	CARBON 1K 5% 1/4W	
	4-201-023-01	SPACER, INSULATING; IC261		R005	1-249-417-11	CARBON 1K 5% 1/4W	
	4-812-134-00	RIVET NYLON, 3.5; IC261		R006	1-249-429-11	CARBON 10K 5% 1/4W	
IC501	8-759-970-73	IC TEA2028B		R007	1-249-425-11	CARBON 4.7K 5% 1/4W	
IC502	8-759-944-57	IC TDA8170		R008	1-249-429-11	CARBON 10K 5% 1/4W	
IC601	8-759-988-95	IC TEA2260		R009	1-249-429-11	CARBON 10K 5% 1/4W	
IC604	8-759-144-84	IC UPC24M05HF		R010	1-249-413-11	CARBON 470 5% 1/4W	
IC608	8-759-982-13	IC/RC7812FA		R011	1-249-425-11	CARBON 4.7K 5% 1/4W	
		<COIL>		R012	1-249-417-11	CARBON 1K 5% 1/4W	
L001	1-408-414-00	INDUCTOR 27UH		R013	1-249-429-11	CARBON 10K 5% 1/4W	
L501	1-408-225-00	INDUCTOR 3.3UH		R014	1-249-428-11	CARBON 8.2K 5% 1/4W	
L601	*1-420-872-00	COIL, AIR CORE		R015	1-249-423-11	CARBON 3.3K 5% 1/4W	
L602	1-410-396-41	FERRITE BEAD INDUCTOR		R016	1-249-435-11	CARBON 33K 5% 1/4W	
L603	1-410-396-41	FERRITE BEAD INDUCTOR		R017	1-249-436-11	CARBON 39K 5% 1/4W	
L604	1-410-671-31	INDUCTOR 47UH		R018	1-249-440-11	CARBON 82K 5% 1/4W	
L605	1-459-585-11	COIL (WITH CORE) (DRUM TYPE)		R019	1-249-417-11	CARBON 1K 5% 1/4W	
L606	1-421-013-00	COIL (HORIZONTAL CHOKE) 25UH		R020	1-249-417-11	CARBON 1K 5% 1/4W	
L607	1-410-671-31	INDUCTOR 47UH		R021	1-249-425-11	CARBON 4.7K 5% 1/4W	
L803	1-459-104-00	COIL, DUST CORE		R022	1-249-425-11	CARBON 4.7K 5% 1/4W	
L804	1-408-239-00	INDUCTOR 4.7MMH		R023	1-249-410-11	CARBON 270 5% 1/4W	
L805 Δ	1-459-755-12	COIL, HORIZONTAL LINEARTY					
L806	1-459-111-00	COIL, DRAM CORE (CDI)					
L809	*1-420-872-00	COIL, AIR CORE					

D

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R024	1-249-417-11	CARBON	1K 5% 1/4W	R264	1-216-357-00	METAL OXIDE	4.7 5% 1W F
R025	1-249-405-11	CARBON	100 5% 1/4W	R265	1-249-429-11	CARBON	10K 5% 1/4W
R026	1-249-417-11	CARBON	1K 5% 1/4W	R266	1-247-897-11	CARBON	560K 5% 1/4W
R027	1-249-405-11	CARBON	100 5% 1/4W	R267	1-249-431-11	CARBON	15K 5% 1/4W
R028	1-249-405-11	CARBON	100 5% 1/4W	R268	1-215-869-11	METAL OXIDE	1K 5% 1W F
R029	1-249-429-11	CARBON	10K 5% 1/4W	R269	1-249-425-11	CARBON	4.7K 5% 1/4W
R030	1-249-429-11	CARBON	10K 5% 1/4W	R271	1-249-415-11	CARBON	680 5% 1/4W
R031	1-249-433-11	CARBON	22K 5% 1/4W	R272	1-249-429-11	CARBON	10K 5% 1/4W
R032	1-249-429-11	CARBON	10K 5% 1/4W	R273	1-249-429-11	CARBON	10K 5% 1/4W
R033	1-249-429-11	CARBON	10K 5% 1/4W	R500	1-247-897-11	CARBON	560K 5% 1/4W
R034	1-249-431-11	CARBON	15K 5% 1/4W	R501	1-249-413-11	CARBON	470 5% 1/4W
R035	1-249-433-11	CARBON	22K 5% 1/4W	R502	1-249-409-11	CARBON	220 5% 1/4W
R036	1-249-432-11	CARBON	18K 5% 1/4W	R503	1-249-410-11	CARBON	270 5% 1/4W
R037	1-249-425-11	CARBON	4.7K 5% 1/4W	R504	1-215-427-00	METAL	1.8K 1% 1/6W
R038	1-249-422-11	CARBON	2.7K 5% 1/4W	R505	1-249-431-11	CARBON	15K 5% 1/4W
R039	1-249-433-11	CARBON	22K 5% 1/4W	R506	1-249-428-11	CARBON	8.2K 5% 1/4W
R040	1-249-431-11	CARBON	15K 5% 1/4W	R509	1-249-424-11	CARBON	3.9K 5% 1/4W
R041	1-249-429-11	CARBON	10K 5% 1/4W	R510	1-249-426-11	CARBON	5.6K 5% 1/4W
R042	1-249-417-11	CARBON	1K 5% 1/4W	R514	1-249-409-11	CARBON	220 5% 1/4W
R043	1-249-413-11	CARBON	470 5% 1/4W	R515	1-249-423-11	CARBON	3.3K 5% 1/4W
R044	1-249-441-11	CARBON	100K 5% 1/4W	R517	1-249-429-11	CARBON	10K 5% 1/4W
R045	1-249-423-11	CARBON	3.3K 5% 1/4W	R518	1-249-437-11	CARBON	47K 5% 1/4W
R046	1-249-435-11	CARBON	33K 5% 1/4W	R519	1-249-433-11	CARBON	22K 5% 1/4W
R047	1-249-429-11	CARBON	10K 5% 1/4W	R520	1-249-411-11	CARBON	330 5% 1/4W
R048	1-249-429-11	CARBON	10K 5% 1/4W	R521	1-249-405-11	CARBON	100 5% 1/4W
R049	1-249-429-11	CARBON	10K 5% 1/4W	R522	1-215-469-00	METAL	100K 1% 1/6W
R050	1-249-426-11	CARBON	5.6K 5% 1/4W	R523	1-249-417-11	CARBON	1K 5% 1/4W
R051	1-249-413-11	CARBON	470 5% 1/4W	R524	1-249-421-11	CARBON	2.2K 5% 1/4W
R052	1-249-417-11	CARBON	1K 5% 1/4W	R525	1-249-417-11	CARBON	1K 5% 1/4W
R053	1-249-417-11	CARBON	1K 5% 1/4W	R526	1-249-409-11	CARBON	220 5% 1/4W
R054	1-249-417-11	CARBON	1K 5% 1/4W	R527	1-249-431-11	CARBON	15K 5% 1/4W
R055	1-249-411-11	CARBON	330 5% 1/4W	R528	1-249-408-11	CARBON	180 5% 1/4W
R056	1-249-405-11	CARBON	100 5% 1/4W	R529	1-249-427-11	CARBON	6.8K 5% 1/4W
R057	1-249-409-11	CARBON	220 5% 1/4W	R530	1-249-448-11	CARBON	1.2 5% 1/4W
R058	1-249-424-11	CARBON	3.9K 5% 1/4W	R531	1-247-881-00	CARBON	120K 5% 1/4W
R059	1-249-417-11	CARBON	1K 5% 1/4W	R532	1-249-417-11	CARBON	1K 5% 1/4W
R060	1-249-417-11	CARBON	1K 5% 1/4W	R534	1-247-901-11	CARBON	820K 5% 1/4W
R061	1-249-417-11	CARBON	1K 5% 1/4W	R535	1-249-749-00	CARBON	2.2M 5% 1/4W
R062	1-249-417-11	CARBON	1K 5% 1/4W	R536	1-249-749-00	CARBON	2.2M 5% 1/4W
R063	1-249-417-11	CARBON	1K 5% 1/4W	R537	1-249-434-11	CARBON	27K 5% 1/4W
R064	1-249-417-11	CARBON	1K 5% 1/4W	R538	1-247-883-00	CARBON	150K 5% 1/4W
R065	1-249-417-11	CARBON	1K 5% 1/4W	R539	1-247-883-00	CARBON	150K 5% 1/4W
R066	1-249-417-11	CARBON	1K 5% 1/4W	R540	1-249-399-11	CARBON	33 5% 1/4W
R067	1-249-417-11	CARBON	1K 5% 1/4W	R541	1-249-438-11	CARBON	56K 5% 1/4W
R068	1-249-417-11	CARBON	1K 5% 1/4W	R542	1-249-389-11	CARBON	4.7 5% 1/4W
R069	1-249-417-11	CARBON	1K 5% 1/4W	R543	1-249-451-11	CARBON	2.2 5% 1/4W
R070	1-249-417-11	CARBON	1K 5% 1/4W	R544	1-247-745-11	CARBON	330 5% 1/2W
R071	1-249-417-11	CARBON	1K 5% 1/4W	R545	1-249-433-11	CARBON	22K 5% 1/4W
R072	1-249-417-11	CARBON	1K 5% 1/4W	R546	1-249-434-11	CARBON	27K 5% 1/4W
R073	1-249-417-11	CARBON	1K 5% 1/4W	R547	1-249-423-11	CARBON	3.3K 5% 1/4W
R074	1-249-425-11	CARBON	4.7K 5% 1/4W	R548	1-216-349-00	METAL OXIDE	1 5% 1W F
R075	1-249-409-11	CARBON	220 5% 1/4W	R549	1-216-454-11	METAL OXIDE	390 5% 2W F
R251	1-249-425-11	CARBON	4.7K 5% 1/4W	R550	1-249-440-11	CARBON	82K 5% 1/4W
R252	1-249-412-11	CARBON	390 5% 1/4W	R551	1-249-749-00	CARBON	2.2M 5% 1/4W
R253	1-249-429-11	CARBON	10K 5% 1/4W	R553	1-216-869-11	METAL OXIDE	1K 5% 1W
R254	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R554	1-249-411-11	CARBON	330 5% 1/4W
R255	1-249-429-11	CARBON	10K 5% 1/4W	R555	1-249-749-00	CARBON	2.2M 5% 1/4W
R256	1-247-897-11	CARBON	560K 5% 1/4W	R556	1-249-405-11	CARBON	100 5% 1/4W
R257	1-249-431-11	CARBON	15K 5% 1/4W	R557	1-249-425-11	CARBON	4.7K 5% 1/4W
R258	1-215-869-11	METAL OXIDE	1K 5% 1W F	R558	1-247-895-00	CARBON	470K 5% 1/4W
R259	1-249-425-11	CARBON	4.7K 5% 1/4W	R559	1-249-427-11	CARBON	6.8K 5% 1/4W
R261	1-249-425-11	CARBON	4.7K 5% 1/4W	R560	1-249-411-11	CARBON	330 5% 1/4W
R262	1-249-412-11	CARBON	390 5% 1/4W	R591	1-249-416-11	CARBON	820 5% 1/4W
R263	1-249-429-11	CARBON	10K 5% 1/4W				

D H1 H2

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R592	1-249-417-11	CARBON	1K 5% 1/4W	R5505	1-249-393-11	CARBON 10 5% 1/4W	
R593	1-249-419-11	CARBON	1.5K 5% 1/4W			<VARIABLE RESISTOR>	
R594	1-249-428-11	CARBON	8.2K 5% 1/4W	RV501	1-238-013-11	RES, ADJ. CARBON 2.2K	
R597	1-249-413-11	CARBON	470 5% 1/4W	RV502	1-238-016-11	RES, ADJ. CARBON 10K	
R598	1-215-900-11	METAL OXIDE	22K 5% 2W F	RV601	1-238-011-11	RES, ADJ. CARBON 470	
R599	1-247-887-00	CARBON	220K 5% 1/4W			<SPARK GAP>	
R600	1-249-381-11	CARBON	1 5% 1/4W	SG801	1-519-422-11	GAP, SPARK	
R603	1-216-400-11	METAL OXIDE	8.2 5% 3W F			<TRANSFORMER>	
R604	1-249-405-11	CARBON	100 5% 1/4W	T601 Δ	1-449-822-11	TRANSFORMER	
R605	1-249-433-11	CARBON	22K 5% 1/4W	T602 Δ	1-424-277-11	TRANSFORMER, TRIGGER PULSE	
R606	1-249-418-11	CARBON	1.2K 5% 1/4W	T801 Δ	1-437-090-21	HDT	
R607	1-249-425-11	CARBON	4.7K 5% 1/4W	T802 Δ	1-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)	
R608	1-216-488-11	METAL OXIDE	18K 5% 3W F			*****	
R609	1-249-396-11	CARBON	18 5% 1/4W	*1-631-220-11	H1 BOARD		
R610	1-244-941-00	CARBON	680K 5% 1/2W		*****		
R611	1-249-400-11	CARBON	39 5% 1/4W	1-562-837-11	JACK		
R612	1-249-417-11	CARBON	1K 5% 1/4W	*1-564-512-11	PLUG, CONNECTOR 9P		
R613	1-249-441-11	CARBON	100K 5% 1/4W	1-568-678-11	TERMINAL BLOCK, S 3P		
R614	1-205-758-11	WIREWOUND	100 10% 10W F	*1-568-878-51	PIN, CONNECTOR 3P		
R616	1-247-881-00	CARBON	120K 5% 1/4W	*1-568-879-51	PIN, CONNECTOR 4P		
R617	1-249-411-11	CARBON	330 5% 1/4W	*1-568-879-61	PIN, CONNECTOR 4P		
R618	1-216-431-11	METAL OXIDE	560 5% 1W F			<RESISTOR>	
R619	1-249-429-11	CARBON	10K 5% 1/4W	R1651	1-249-413-11	CARBON 470 5% 1/4W	
R620	1-249-433-11	CARBON	22K 5% 1/4W	R1652	1-249-413-11	CARBON 470 5% 1/4W	
R621	1-249-431-11	CARBON	15K 5% 1/4W			<SWITCH>	
R622	1-249-429-11	CARBON	10K 5% 1/4W	S1651	1-571-532-21	SWITCH, TACTIL.	
R623	1-249-433-11	CARBON	22K 5% 1/4W	S1652	1-571-532-21	SWITCH, TACTIL.	
R624	1-249-426-11	CARBON	5.6K 5% 1/4W	S1653	1-571-532-21	SWITCH, TACTIL.	
R625	1-215-865-11	METAL OXIDE	220 5% 1W F			*****	
R626	1-249-411-11	CARBON	330 5% 1/4W	*1-631-221-11	H2 BOARD		
R628	1-249-393-11	CARBON	10 5% 1/4W		*****		
R629	1-249-411-11	CARBON	330 5% 1/4W	*1-568-882-51	PIN, CONNECTOR 7P		
R633	1-249-417-11	CARBON	1K 5% 1/4W	*4-374-987-01	GUIDE, LIGHT		
R634	1-216-430-11	METAL OXIDE	390 5% 1W F	*4-381-686-01	BRACKET (B), LIGHT GUIDE		
R635	1-249-429-11	CARBON	10K 5% 1/4W			<DIODE>	
R636	1-249-429-11	CARBON	10K 5% 1/4W	D1651	8-719-311-89	DIODE SEL1222R-C	
R643	1-217-189-21	WIREWOUND	0.12 5% 2W F	*4-387-801-01	HOLDER, LED; D1651		
R647	1-216-485-11	METAL OXIDE	5.6K 5% 3W F	D1652	8-719-311-89	DIODE SEL1222R-C	
R648	1-216-485-11	METAL OXIDE	5.6K 5% 3W F	*4-387-801-01	HOLDER, LED; D1652		
R651	1-249-405-11	CARBON	100 5% 1/4W	D1653	8-719-311-89	DIODE SEL1222R-C	
R653	1-205-758-11	WIREWOUND	100 10% 10W F	*4-387-801-01	HOLDER, LED; D1653		
R802	1-249-443-11	CARBON	0.47 5% 1/4W F	D1654	8-719-948-31	DIODE LD-201VR	
R805	1-249-448-11	CARBON	1.2 5% 1/4W F	*4-387-825-02	HOLDER, LED; D1654		
R806	1-249-439-11	CARBON	68K 5% 1/4W			<IC>	
R807	1-216-869-11	METAL OXIDE	1K 5% 1W	IC1651	8-741-138-70	IC BX-1387	
R809	1-202-821-11	SOLID	1.8K 10% 1/2W				
R810	1-202-818-00	SOLID	1K 10% 1/2W				
R811	1-215-882-00	METAL OXIDE	22 5% 2W F				
R812	1-249-494-11	CARBON	68K 5% 1/2W				
R815	1-215-884-11	METAL OXIDE	47 5% 2W F				
R816	1-215-868-00	METAL OXIDE	680 5% 1W F				
R817	1-249-417-11	CARBON	1K 5% 1/4W				
R820	1-249-403-11	CARBON	68 5% 1/4W				
R821	1-247-725-11	CARBON	10K 5% 1/4W F				
R822 Δ	1-217-778-61	FUSIBLE	1K 5% 1W F				
R825	1-216-345-11	METAL OXIDE	0.47 5% 1W F				
R826	1-249-441-11	CARBON	100K 5% 1/4W				
R827	1-249-429-11	CARBON	10K 5% 1/4W				
R828	1-249-423-11	CARBON	3.3K 5% 1/4W				
R829	1-249-416-11	CARBON	820 5% 1/4W				
R831	1-249-451-11	CARBON	2.2 5% 1/4W				
R5501	1-249-429-11	CARBON	10K 5% 1/4W				
R5503	1-249-389-11	CARBON	4.7 5% 1/4W				
R5504	1-247-903-00	CARBON	1M 5% 1/4W				

H2	Y	J2	J1
----	---	----	----

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<RESISTOR>							
R1661	1-249-413-11	CARBON	470 5% 1/4W	R1714	1-249-417-11	CARBON	1K 5% 1/4W
R1662	1-249-413-11	CARBON	470 5% 1/4W	R1717	1-249-417-11	CARBON	1K 5% 1/4W
*****				R1718	1-249-417-11	CARBON	1K 5% 1/4W
*1-631-217-11 Y BOARD				*****			
*****				*1-631-222-11 J2 BOARD			
*1-568-881-61 PIN, CONNECTOR 6P				*****			
*1-568-882-71 PIN, CONNECTOR 7P				1-537-088-21 TERMINAL BOARD, INPUT/OUTPUT			
<CAPACITOR>				*1-564-517-11 PLUG, CONNECTOR 2P			
C1701	1-126-233-11	ELECT	22MF 20% 50V	*1-564-519-11 PLUG, CONNECTOR 4P			
C1702	1-101-004-00	CERAMIC	0.01MF 50V	<CAPACITOR>			
C1703	1-126-233-11	ELECT	22MF 20% 50V	C1751	1-101-005-00	CERAMIC	0.022MF 50V
C1704	1-101-004-00	CERAMIC	0.01MF 50V	C1752	1-101-005-00	CERAMIC	0.022MF 50V
C1705	1-126-233-11	ELECT	22MF 20% 50V	C1755	1-102-114-00	CERAMIC	470PF 10% 50V
C1706	1-126-233-11	ELECT	22MF 20% 50V	C1756	1-102-114-00	CERAMIC	470PF 10% 50V
C1707	1-126-233-11	ELECT	22MF 20% 50V	<COIL>			
C1710	1-102-959-00	CERAMIC	22PF 5% 50V	L1751	1-412-240-11	INDUCTOR, WIDE BAND	
C1711	1-101-888-00	CERAMIC	68PF 5% 50V	L1752	1-412-240-11	INDUCTOR, WIDE BAND	
<DIODE>				*****			
D1701	8-719-911-19	DIODE 1SS119		*A-1651-003-A J1 BOARD, COMPLETE			
<NR PACK>				*****			
DNR170	1-466-181-11	NR PACK (NRP-2E)		1-561-534-41 SOCKET 21P			
<IC>				*1-564-518-11 PLUG, CONNECTOR 3P			
IC1701	8-759-982-10	IC RC7809FA		*1-564-524-11 PLUG, CONNECTOR 9P			
IC1702	8-759-604-29	IC M5F7805		*1-564-527-11 PLUG, CONNECTOR 12P			
<COIL>				*1-566-641-11 CONNECTOR, HINGE (TAB) 18P			
L1701	1-410-671-31	INDUCTOR	47UH	<CAPACITOR>			
L1702	1-408-405-00	INDUCTOR	4.7UH	C203	1-124-925-11	ELECT	2.2MF 20% 50V
L1703	1-410-671-31	INDUCTOR	47UH	C205	1-124-927-11	ELECT	4.7MF 20% 50V
<TRANSISTOR>				C206	1-124-925-11	ELECT	2.2MF 20% 50V
Q1701	8-729-900-89	TRANSISTOR DTC144ES		C207	1-124-927-11	ELECT	4.7MF 20% 50V
Q1702	8-729-900-89	TRANSISTOR DTC144ES		C213	1-126-233-11	ELECT	22MF 20% 50V
Q1703	8-729-900-80	TRANSISTOR DTC114ES		C214	1-106-363-00	MYLAR	0.0068MF 10% 400V
Q1704	8-729-119-78	TRANSISTOR 2SC2785-HFE		C217	1-106-363-00	MYLAR	0.0068MF 10% 400V
Q1705	8-729-173-38	TRANSISTOR 2SA733-K		C218	1-106-375-12	MYLAR	0.022MF 10% 250V
<RESISTOR>				C219	1-106-375-12	MYLAR	0.022MF 10% 250V
R1701	1-215-860-11	METAL OXIDE	33 5% 1W	C220	1-108-620-11	MYLAR	0.0033MF 10% 100V
R1702	1-249-425-11	CARBON	4.7K 5% 1/4W	C221	1-108-620-11	MYLAR	0.0033MF 10% 100V
R1703	1-249-434-11	CARBON	27K 5% 1/4W	C222	1-106-385-00	MYLAR	0.056MF 10% 100V
R1704	1-249-425-11	CARBON	4.7K 5% 1/4W	C223	1-106-385-00	MYLAR	0.056MF 10% 100V
R1705	1-249-426-11	CARBON	5.6K 5% 1/4W	C224	1-106-367-00	MYLAR	0.01MF 10% 400V
R1706	1-249-427-11	CARBON	6.8K 5% 1/4W	C225	1-136-173-00	FILM	0.47MF 5% 50V
R1707	1-249-429-11	CARBON	10K 5% 1/4W	C226	1-136-173-00	FILM	0.47MF 5% 50V
R1708	1-249-429-11	CARBON	10K 5% 1/4W	C227	1-106-375-12	MYLAR	0.022MF 10% 250V
R1710	1-249-433-11	CARBON	22K 5% 1/4W	C228	1-106-379-12	MYLAR	0.033MF 10% 250V
R1711	1-249-438-11	CARBON	56K 5% 1/4W	C229	1-106-371-00	MYLAR	0.015MF 10% 400V
R1712	1-249-413-11	CARBON	470 5% 1/4W	C230	1-106-371-00	MYLAR	0.015MF 10% 400V
R1713	1-249-414-11	CARBON	560 5% 1/4W	C231	1-124-902-00	ELECT	0.47MF 20% 50V
				C232	1-123-875-11	ELECT	10MF 20% 50V
				C233	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
				C234	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
				C235	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
				C236	1-163-005-11	CERAMIC CHIP	470PF 10% 50V
				C237	1-124-902-00	ELECT	0.47MF 20% 50V
				C238	1-163-125-00	CERAMIC CHIP	220PF 5% 50V

J1

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK	
C239	1-126-103-11	ELECT	470MF	20%	16V	D206	8-719-110-04	DIODE RD7.5ES-B3
C1401	1-123-875-11	ELECT	10MF	20%	50V	D1401	8-719-110-04	DIODE RD7.5ES-B3
C1402	1-126-103-11	ELECT	470MF	20%	16V	D1403	8-719-110-04	DIODE RD7.5ES-B3
C1403	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	D1404	8-719-110-04	DIODE RD7.5ES-B3
C1404	1-124-902-00	ELECT	0.47MF	20%	50V	D1405	8-719-110-04	DIODE RD7.5ES-B3
C1405	1-136-017-00	CERAMIC CHIP	0.0047MF		50V	D1406	8-719-110-04	DIODE RD7.5ES-B3
C1406	1-124-902-00	ELECT	0.47MF	20%	50V	D1407	8-719-110-18	DIODE RD10ES-B3
C1407	1-124-910-11	ELECT	47MF	20%	50V	D1408	8-719-110-14	DIODE RD9.1ES-B3
C1408	1-124-122-11	ELECT	100MF	20%	50V	D1409	8-719-110-14	DIODE RD9.1ES-B3
C1409	1-126-233-11	ELECT	22MF	20%	50V	D1410	8-719-110-14	DIODE RD9.1ES-B3
C1410	1-123-875-11	ELECT	10MF	20%	50V	D1415	8-719-110-04	DIODE RD7.5ES-B3
C1411	1-123-875-11	ELECT	10MF	20%	50V	D1418	8-719-110-04	DIODE RD7.5ES-B3
C1412	1-124-910-11	ELECT	47MF	20%	50V	D1419	8-719-110-04	DIODE RD7.5ES-B3
C1413	1-124-910-11	ELECT	47MF	20%	50V	D1420	8-719-110-04	DIODE RD7.5ES-B3
C1414	1-123-875-11	ELECT	10MF	20%	50V	D1421	8-719-110-04	DIODE RD7.5ES-B3
C1415	1-124-902-00	ELECT	0.47MF	20%	50V	D1422	8-719-110-04	DIODE RD7.5ES-B3
C1416	1-124-902-00	ELECT	0.47MF	20%	50V	D1423	8-719-110-04	DIODE RD7.5ES-B3
C1417	1-124-120-11	ELECT	220MF	20%	16V	D1424	8-719-110-04	DIODE RD7.5ES-B3
C1418	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	D1425	8-719-110-04	DIODE RD7.5ES-B3
C1419	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	D1426	8-719-110-04	DIODE RD7.5ES-B3
C1425	1-124-902-00	ELECT	0.47MF	20%	50V	D1501	8-719-300-33	DIODE RU-3AM
C1426	1-124-902-00	ELECT	0.47MF	20%	50V	D1502	8-719-911-19	DIODE 1SS119
C1427	1-136-017-00	CERAMIC CHIP	0.0047MF		50V	D1503	8-719-911-19	DIODE 1SS119
C1428	1-136-017-00	CERAMIC CHIP	0.0047MF		50V	D1504	8-719-911-19	DIODE 1SS119
C1429	1-136-017-00	CERAMIC CHIP	0.0047MF		50V	D1505	8-719-911-19	DIODE 1SS119
C1430	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	D1506	8-719-110-85	DIODE RD36ES-B4
C1431	1-126-529-11	ELECT	0.47MF	20%	50V	D1507	8-719-911-19	DIODE 1SS119
C1432	1-124-902-00	ELECT	0.47MF	20%	50V	D1510	8-719-911-19	DIODE 1SS119
C1433	1-124-122-11	ELECT	100MF	20%	50V			<IC>
C1436	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	IC201	8-759-013-17	IC TDA6200
C1437	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	IC1401	8-752-032-27	IC CXA1114P
C1438	1-106-367-00	MYLAR	0.01MF	10%	400V	IC1402	8-759-946-32	IC TEA2014A
C1439	1-106-367-00	MYLAR	0.01MF	10%	400V	IC1403	8-759-240-53	IC TC4053BP
C1440	1-123-875-11	ELECT	10MF	20%	50V	IC1501	8-759-942-16	IC TEA2031A
C1441	1-123-875-11	ELECT	10MF	20%	50V			<TRANSISTOR>
C1442	1-124-910-11	ELECT	47MF	20%	50V	Q201	8-729-271-22	TRANSISTOR 2SC2712-G
C1443	1-124-910-11	ELECT	47MF	20%	50V	Q202	8-729-271-22	TRANSISTOR 2SC2712-G
C1444	1-124-910-11	ELECT	47MF	20%	50V	Q1401	8-729-216-22	TRANSISTOR 2SA1162
C1445	1-102-824-00	CERAMIC	470PF	5%	50V	Q1402	8-729-271-22	TRANSISTOR 2SC2712-G
C1446	1-102-824-00	CERAMIC	470PF	5%	50V	Q1403	8-729-271-22	TRANSISTOR 2SC2712-G
C1501	1-123-875-11	ELECT	10MF	20%	50V	Q1404	8-729-216-22	TRANSISTOR 2SA1162
C1502	1-123-875-11	ELECT	10MF	20%	50V			<RESISTOR>
C1503	1-108-614-11	MYLAR	0.001MF	10%	100V	R201	1-216-091-00	METAL GLAZE 56K 5% 1/10W
C1504	1-124-910-11	ELECT	47MF	20%	50V	R202	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W
C1505	1-106-383-00	MYLAR	0.047MF	10%	100V	R203	1-216-075-00	METAL GLAZE 12K 5% 1/10W
C1507	1-108-620-11	MYLAR	0.0033MF	10%	100V	R204	1-216-085-00	METAL GLAZE 33K 5% 1/10W
C1508	1-123-875-11	ELECT	10MF	20%	50V	R205	1-216-085-00	METAL GLAZE 33K 5% 1/10W
C1509	1-124-791-11	ELECT	1MF	20%	50V	R206	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
C1511	1-123-875-11	ELECT	10MF	20%	50V	R207	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
C1512	1-106-363-00	MYLAR	0.0068MF	10%	400V	R208	1-216-077-00	METAL GLAZE 15K 5% 1/10W
C1513	1-163-105-00	CERAMIC CHIP	33PF	5%	50V	R209	1-216-081-00	METAL GLAZE 22K 5% 1/10W
C1514	1-106-375-12	MYLAR	0.022MF	10%	250V	R210	1-216-077-00	METAL GLAZE 15K 5% 1/10W
C1515	1-102-117-00	CERAMIC	820PF	10%	50V	R211	1-216-097-00	METAL GLAZE 100K 5% 1/10W
		<CONNECTOR>				R212	1-216-081-00	METAL GLAZE 22K 5% 1/10W
CN1401	1-565-838-11	PIN JACK BLOCK 2P				R213	1-216-077-00	METAL GLAZE 15K 5% 1/10W
		<DIODE>				R214	1-216-033-00	METAL GLAZE 220 5% 1/10W
D201	8-719-110-14	DIODE RD9.1ES-B3				R215	1-216-081-00	METAL GLAZE 22K 5% 1/10W
D202	8-719-110-14	DIODE RD9.1ES-B3						
D205	8-719-110-04	DIODE RD7.5ES-B3						

J1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R216	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1454	1-216-180-00	METAL GLAZE	180 5% 1/8W
R217	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R1455	1-216-180-00	METAL GLAZE	180 5% 1/8W
R218	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1457	1-216-025-00	METAL GLAZE	100 5% 1/10W
R219	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1459	1-216-025-00	METAL GLAZE	100 5% 1/10W
R220	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R1460	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R221	1-216-041-00	METAL GLAZE	470 5% 1/10W	R1461	1-216-190-00	METAL GLAZE	470 5% 1/8W
R222	1-216-041-00	METAL GLAZE	470 5% 1/10W	R1462	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R223	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1463	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R224	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1464	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
R225	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1465	1-216-023-00	METAL GLAZE	82 5% 1/10W
R226	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1466	1-216-033-00	METAL GLAZE	220 5% 1/10W
R227	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1467	1-216-025-00	METAL GLAZE	100 5% 1/10W
R228	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1468	1-216-025-00	METAL GLAZE	100 5% 1/10W
R229	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R1469	1-216-025-00	METAL GLAZE	100 5% 1/10W
R230	1-216-091-00	METAL GLAZE	56K 5% 1/10W	R1470	1-216-025-00	METAL GLAZE	100 5% 1/10W
R231	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1471	1-216-023-00	METAL GLAZE	82 5% 1/10W
R232	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1472	1-216-023-00	METAL GLAZE	82 5% 1/10W
R233	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R1473	1-216-023-00	METAL GLAZE	82 5% 1/10W
R234	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R1474	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R240	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1476	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R1401	1-216-023-00	METAL GLAZE	82 5% 1/10W	R1477	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R1402	1-216-170-00	METAL GLAZE	68 5% 1/8W	R1478	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R1403	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R1480	1-216-190-00	METAL GLAZE	470 5% 1/8W
R1404	1-216-178-00	METAL GLAZE	150 5% 1/8W	R1482	1-216-178-00	METAL GLAZE	150 5% 1/8W
R1405	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1483	1-216-178-00	METAL GLAZE	150 5% 1/8W
R1407	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R1484	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R1408	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R1485	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R1409	1-216-041-00	METAL GLAZE	470 5% 1/10W	R1486	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R1410	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R1487	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R1411	1-216-041-00	METAL GLAZE	470 5% 1/10W	R1488	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R1412	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R1489	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R1413	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R1501	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1414	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R1502	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R1415	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R1503	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R1416	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R1504	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R1417	1-216-023-00	METAL GLAZE	82 5% 1/10W	R1505	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R1418	1-247-738-11	CARBON	82 5% 1/2W F	R1506	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R1422	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1509	1-216-105-00	METAL GLAZE	220K 5% 1/10W
R1423	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R1510	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R1424	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R1511	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R1425	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1512	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R1426	1-216-025-00	METAL GLAZE	100 5% 1/10W	R1513	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R1427	1-216-001-00	METAL GLAZE	10 5% 1/10W	R1514	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R1428	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R1515	1-216-117-00	METAL GLAZE	680K 5% 1/10W
R1429	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R1516	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R1430	1-216-170-00	METAL GLAZE	68 5% 1/8W	R1517	1-216-033-00	METAL GLAZE	220 5% 1/10W
R1431	1-249-413-11	CARBON	470 5% 1/4W	R1519	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R1432	1-249-413-11	CARBON	470 5% 1/4W	R1520	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R1433	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1521	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W
R1434	1-249-393-11	CARBON	10 5% 1/4W F	R1556	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R1437	1-216-073-00	METAL GLAZE	10K 5% 1/10W	<VARIABLE RESISTOR>			
R1440	1-216-045-00	METAL GLAZE	680 5% 1/10W	RV1501	1-238-023-11	RES, ADJ, CARBON	470K
R1441	1-216-045-00	METAL GLAZE	680 5% 1/10W	RV1502	1-228-994-00	RES, ADJ, CARBON	10K
R1442	1-216-089-00	METAL GLAZE	47K 5% 1/10W	RV1503	1-238-017-11	RES, ADJ, CARBON	22K
R1443	1-216-089-00	METAL GLAZE	47K 5% 1/10W	RV1504	1-238-012-11	RES, ADJ, CARBON	1K
R1444	1-216-033-00	METAL GLAZE	220 5% 1/10W	RV1505	1-238-023-11	RES, ADJ, CARBON	470K
R1445	1-216-095-00	METAL GLAZE	82K 5% 1/10W	RV1506	1-238-017-11	RES, ADJ, CARBON	22K
R1446	1-216-033-00	METAL GLAZE	220 5% 1/10W	RV1507	1-238-009-11	RES, ADJ, CARBON	220
R1447	1-216-033-00	METAL GLAZE	220 5% 1/10W	RV1508	1-238-016-11	RES, ADJ, CARBON	10K
R1448	1-216-025-00	METAL GLAZE	100 5% 1/10W	RV1509	1-238-023-11	RES, ADJ, CARBON	470K
R1452	1-216-049-00	METAL GLAZE	1K 5% 1/10W	*****			
R1453	1-216-049-00	METAL GLAZE	1K 5% 1/10W				

The components identified by shading and mark **△** are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
---------	----------	-------------	--------

MISCELLANEOUS

△	1-426-372-11	COIL, DEMAGNETIZATION	
△	1-451-311-31	DEFLECTION YORE (Y25FXA)	
	1-452-032-00	MAGNET, DISK; 10MM φ	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ	
△	1-575-487-11	CORD, POWER (WITH NOISE FILTER)	
V901 △	8-733-224-05	PICTURE TUBE (A59JWC60X)	

ACCESSORIES AND PACKING MATERIALS

PART NO.	DESCRIPTION	REMARK
----------	-------------	--------

1-465-363-11	COMMANDER ASSY (RM-689)	
*A-1678-001-A	BOX ASSY, WOOFER	
*A-1678-010-A	BOX ASSY (RIGHT), SPEAKER	
*A-1678-012-A	BOX ASSY (LEFT), SPEAKER	
*3-704-280-01	BAG, PROTECTION (STANDARD)	
3-759-001-12	MANUAL, INSTRUCTION	
*4-201-012-01	CUSHION (UPPER) (ASSY)	
*4-201-013-01	CUSHION (LOWER) (ASSY)	
*4-201-015-01	INDIVIDUAL CARTON	
*4-380-340-01	BAG, PROTECTION	